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# Amoptico

Published by the American Optical Company  
at Southbridge Massachusetts

Vol. I

April 1910

No. II

AMERICAN OPTICAL COMPANY

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**CENTEX**  
1967  
**Lenses**

**American Optical Company**

**Southbridge, Mass.**

**New York**

**San Francisco**

**London**

**Chicago**



# Amoptico



## An Industry That Aids The Eyesight What "Gold-Filled" Means

**T**O a certain extent "gold-filled" has come to be regarded as one of those numerous trade names whose chief purpose is to conceal rather than explain. Like "German silver," in which there is no silver of any kind, it has been looked at askance. How many opticians are in a position to explain to the "doubting Thomas" of a customer who crops up so frequently, just what gold-filled means and why it can be recommended?

As it has come to be employed, the term is subject to misinterpretation, but by looking back to its origin, its significance at once becomes plain. It does not imply "filled with gold," but gold, filled with a baser metal. But how is it possible to make wire of the extreme fineness ordinarily employed in optical work, of two parts—a shell of gold and a core of base metal? The successful solution of this problem has had an influence on the expansion of the optical industry in this country, the importance of which it is difficult to estimate.

It will doubtless be of considerable interest to the practising optician to learn just how this has been brought about, and how the process is carried on today. As it is the only company making its own supply of seamless, gold-filled wire for optical purposes, no better place than the plant of the American Optical Company, at Southbridge, could be found in which to learn this, but as there are thousands of opticians who are unable to avail themselves of the invitation extended by the "Open door," a short description of the various stages through which the gold and its base metal core pass before emerging as the complete product will serve to illustrate how the result is brought about.

How entirely unfounded is the impression mentioned that "gold-filled" may be simply a trade term of

deception, is probably best illustrated by the fact that the annual consumption of fine gold—the raw material—is close to nine hundred thousand dollars at the Southbridge plant, half of which goes into the manufacture of seamless, gold-filled wire alone.

The first step is naturally the melting of the gold and its alloying to the proper fineness for the finished work—10, 12 or 14 karat. To determine the accuracy with which this has been carried out, small ingots which are poured in cast iron molds, next go to the assaying room, where they are tested and a record of each ingot kept. At this point, the actual manufacture begins. The ingot now measures slightly more than a foot in length by about two inches through—a piece of metal from which several miles of wire may be drawn. By passing it through heavy steel rolls a number of times, the rolls being gradually brought closer and closer together, after each "pass," it assumes the form of a sheet about four feet long by about eight inches wide. From this sheet, if close inspection has shown it to be perfect, a number of flat disks half a foot in diameter are punched in a heavy press. The disks thus made are also carefully inspected for flaws before passing to the next stage.

These operations set up considerable molecular stress in the metal and it is now very much harder than it was when it started as an ingot. Before going further, this must be overcome, so the disks are annealed—brought to a bright red heat in a gas furnace and allowed to cool very slowly. They then go to a very powerful cupping, or drawing press. The disk is placed over a round opening in the bed of the press and a plunger descends: it is no longer a disk, but a shallow cup. By subjecting it to successive "drawings" with different plungers, it finally emerges as a tube about 14 inches long by two inches in diameter, perfectly smooth inside

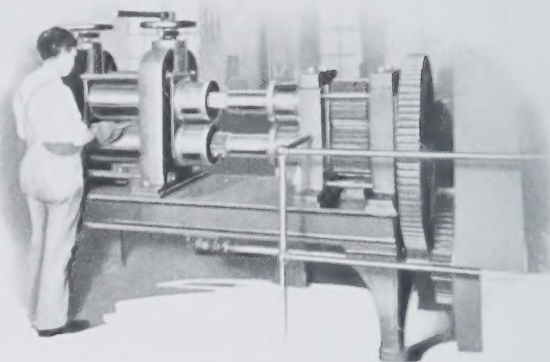


# Amoptico

and out and with walls of accurately predetermined dimensions. The metal has again become hard and must go through a further annealing process.

The tube of 10, 12 or 14 karat gold is then ready to receive its core of base metal, and no little research and experiment was necessary at the outset to determine just what this metal should be. Before inserting in the tube, the workman carefully wraps the core with a thin covering of specially prepared solder, and then the core and tube are forced together under considerable pressure so that they may be in intimate contact. The bar thus made is forced through a steel die, slightly reducing its diameter and insuring an absolute contact between the metals. They are finally combined in a soldering furnace in which the bar is held upright between pivots and slowly revolved so that the two may be perfectly united at every point. The result is an almost absolutely homogeneous bar of metal.

From this point on, the process is wholly one of reduction, with annealing at certain intervals to prevent the metal from becoming hard and brittle, which would unfit it for use. Having been carefully inspected to see that the union is perfect, the bar first goes to a reducing machine where it is passed through one steel die after another, until it is finally in the form of a rod about  $\frac{3}{4}$ -inch thick by 15 feet long. It then passes to a wire drawing machine, where it is still further reduced in diameter, and correspondingly increased in length as it goes through successively smaller dies, the necessity for annealing becoming more and more frequent to preserve the requisite character of the metal. Instead of a bar, it is now in the form of several hundred



One of the Numerous Reducing Processes

yards of comparatively coarse wire — far too heavy to be available for the manufacture of optical goods, so that its diameter must still be greatly reduced.

But below a certain size, it can no longer be drawn through steel dies and still give the accurate and highly finished product that is desirable. Consequently, diamond dies have to be employed — simply a diamond with a hole of the proper diameter drilled through it. The diamond itself is secured in the proper position in a bronze holder, and is inserted in a machine which forcibly drags the gold-filled wire through the opening in the stone. Almost as many steps are required in the diamond drawing process as in the one that just precedes, the wire constantly becoming of a smaller and smaller diameter with each die through which it is passed, until it is finally of the proper size for the manufacture of temples and similar parts. In the diamond drawing machines, it is automatically coiled on reels at the same time, the numerous steps in the process having transformed a short, thick bar into a coil of fine wire, miles in length.

From the brevity with which the numerous operations have been referred to, it might be imagined that the process as a whole is rather a rapid one, but quite the contrary is the case. Annealing is a slow process and has to be resorted to at comparatively frequent intervals, particularly as the wire approaches its finished diameter, as it becomes increasingly important that the final product in the form of seamless-gold-filled wire should possess in a high degree the original characteristic of ductility with which the original bar of shell and core started out. To insure this, as well as the other requirements which the finished product must meet, numerous other operations, that have not been mentioned specifically, have to be gone through, and at every stage of its manufacture the metal must be



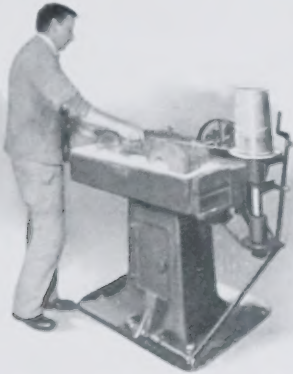
The first step — Pouring the Gold Ingots



subjected to rigid and unremitting inspection. Before finally being sent to the storage vaults as stock for the manufacturing departments, it must undergo a final inspection, assaying and weighing.

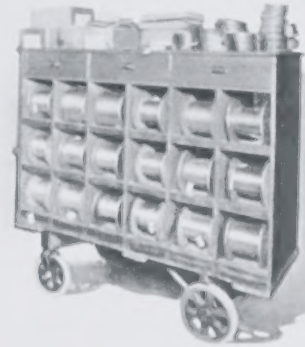
Despite the great care that has been devoted to every step in the lengthy process, there is a possibility of its being rejected at a time when there would appear

be rejected. The same painstaking care that is devoted to the manufacture of solid gold optical wares, is given to the making of gold-filled wire and flat stock at the American Optical Company's plant, and its makers pride themselves quite as much on the uniformly high quality of this product as they do in the case of the former. In fact, the desire to be absolutely certain of



Final drawing through Diamond Dies

to be no further need for inspection. This is the final test of approval and it is chemical rather than mechanical. Of course, this in itself effectively settles the question, not alone as to whether there is any gold in the composition of the finished product, but also how much there is, as unless it can successfully pass the assay test, the same as a piece of solid gold could, the wire must



The Finished Product — Miles of Fine Wire

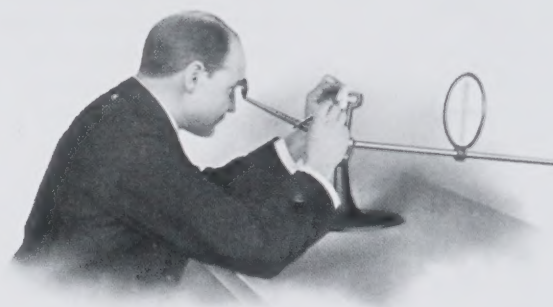
the quantity of gold entering into the various grades of gold-filled stock, as well as to insure the perfection of the process in every case, led to undertaking this manufacture at Southbridge, the A. O. Co. being the only firm in this country making its own supply of gold-filled stock for optical purposes.



Inspecting, Assaying and Weighing the Seamless Gold-filled Wire



# Amoptico



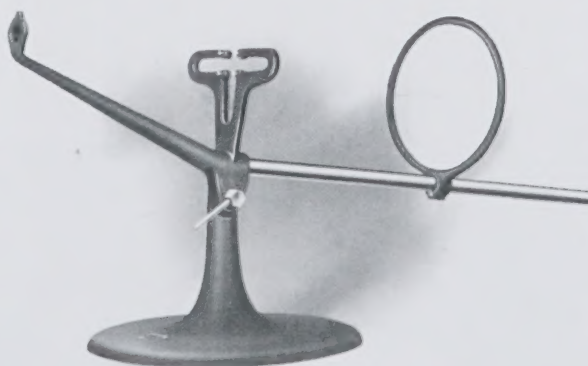
## AOCO Lens Centering Device



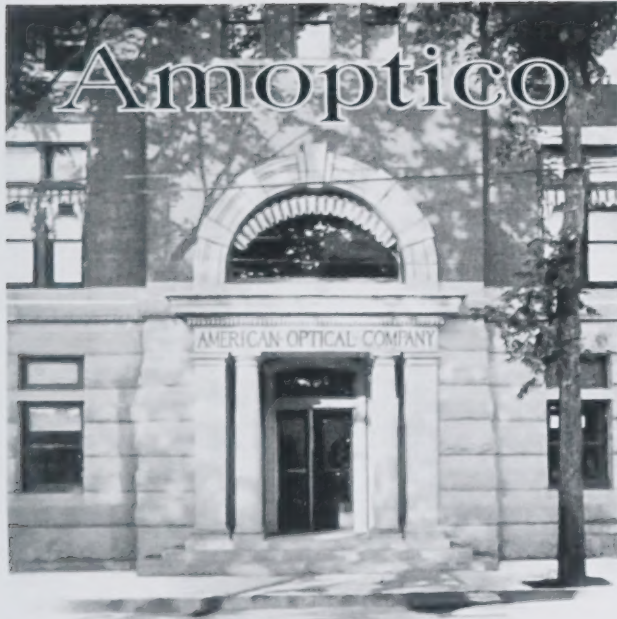
**N**OTHING is of greater importance to the proper fitting of lenses than correct centering. To take care of this need we have designed the AOCO Lens Centering Device. It is extremely simple and efficient. The lens is held against hard rubber points and sighted against the cross lines of the target through a pin hole in the forward arm. When the center corresponds with the intersection of the principal cross lines, the lens is "dotted" with ink. To accommodate lenses of different focal lengths, and for decentering for prismatic power, the target is movable.

A wide base gives stability where it is not desirable to fasten to the bench, while the adjustment permits of sighting at any angle that is convenient. Catalogue number M 112.

**Your Jobber will Quote Prices**







Vol. 1

April, 1910

No. 2

Published Periodically

By

American Optical Company  
Southbridge, Mass.

## Business Confidence

Enlightened self-interest, which has been responsible for the trend of present-day business policies, has conclusively demonstrated that the straight road to success lies in a complete understanding between the manufacturer and dealer. Progress demands that there be no secrets, the great commercial successes of the present century being possible only on a basis of full and mutual confidence. It is to its persistent adherence to this policy, ever since its inception more than three-quarters of a century ago, that the American Optical Company owes its expansion to a degree that must have been far beyond the rosiest dreams of its founders. Ever since that day in 1833, when the manufacture of spectacle frames was first undertaken in the back room of a village jeweler's shop, the business has risen on a solid foundation of mutual confidence.

With the rapid and widespread growth of the interests of the company, it has become increasingly difficult to maintain that close personal relation with its customers, which is one of the chief assets of business intercourse. If it were possible for every optician, not

alone in this but other countries, to avail himself of the opportunity to personally meet the men whom he can otherwise know only as names and to note for himself that integrity of purpose which characterizes every detail of the manufacturing, it would be unnecessary to depart from methods that have hitherto proven effective. But a business that consumes more than a million dollars worth of raw material alone every year, is manifestly beyond this.

For that reason, we have undertaken the publication of "Amoptico." It is our messenger and its purpose is to assist. In helping you, we are helping ourselves by establishing relations of mutual confidence that could otherwise be brought about in the old way only. It is not the intention to make this method take the place of those hitherto employed and a cordial invitation is extended to come to Southbridge whenever the opportunity offers. Whether you can do so or not, we want to keep that fact before you. Our purpose is to bring new things before you, and to accomplish that end we will be glad to send "Amoptico" to you as often as it appears.

## AOC Co Distributing Centers

To facilitate the prompt distribution of A. O. Co. optical goods, as well as the quick communication of information, samples and prices regarding them, and to keep in as close touch as possible with the wholesale optical trade, branch offices have been established in the two most important jobbing centers in this country, while foreign headquarters for export trade have been opened in London. The American branch houses are located in New York, at 15 Maiden Lane, and at 72 East Madison Street, Chicago. Complete lines of samples of every kind will be carried at all times, so that jobbing optical houses will find it convenient to inspect new goods and obtain information concerning them, right at home. In the near future, Pacific Coast interests will be taken care of by a San Francisco Office.

## Good Will as an Asset

By far the most important influence that has contributed to the building up of some of the most widely known and largest mercantile concerns in this country, has been that intangible thing commonly referred to as the good will of the business. By constantly giving careful consideration to the little things in business, a firm unconsciously attains a reputation for integrity and fair-dealing that in time becomes one of



# Amoptico



its most valuable assets. But such things are for the big houses, the average small man is apt to remark. The little fellow in business may think he cannot do the same as the large establishment with large capital and the facilities it makes possible. But why not?

The big business successes of today were not always the tremendous establishments that they are now. With few exceptions, they began on a very small scale. Far smaller, in many instances, than the small merchant of the present who thinks their methods entirely beyond his reach. In fact, their great development may be attributed in very large measure to the attention paid to those very things when they were small, and which, now that the business has expanded, are given more thought than ever.

Your stock may be the most representative line obtainable, your prices as moderate as is consistent with high quality, and your establishment as attractive as it is possible to make it, yet your business is not growing as fast as it should. Are you conscientiously attending to the little things that make friends of your customers? The policy of your house is as important an asset to your business as it is to the largest establishment in the country, for the advertising that your friends give you cannot be bought at so much a line. Make friends of your customers; they will do the rest.

## The AOC Co Ideal Screw Assortment



**Right at hand. The right screw for any repair job**

The most useful repair outfit that the optician can invest in. Think of the convenience of having sixteen different sorts of screws put up in such form that you can put your hand on the right screw for any repair job without a moment's delay.

Sixteen screw-top bottles in a substantially and attractively finished, cloth-covered wood case. Each bottle in a compartment of its own; numbered so that you can quickly identify it by the printed list on the inside of the cover. A fresh supply of screws may be obtained at short notice.

Carried in stock by all wholesale dealers in optical goods.



## Prompt Deliveries

Getting goods on time frequently means doubling your sales. Delays are not only annoying but often prove very expensive. But if your jobber cannot obtain prompt delivery from the manufacturer, he must keep you waiting. Although it involves the making of millions of small articles and an amount of detail that would be appalling to the average optician, we have made prompt delivery one of the cardinal rules of business, and have accordingly systematized our manufacturing to a degree that makes it possible to carry a stock of practically everything the optician needs, constantly ready. Fifty per cent of our orders for regular lines are selected from this standing stock, and the daily records which we are making of the orders received are for the single purpose of enabling us to know the lines which we can add to our stock to still further and constantly improve our ability in this filling of all orders possible from A. O. Co. stock. Dealing with an A. O. Co. jobber means that you can

buy goods right out of stock. He doesn't have to wait for an order from the factory to reach him.

We now have in course of compilation a booklet in which we give complete lists of all lines regularly carried in A. O. Co. stock. The regular use of goods in this list will insure your getting a supply to replenish your own stock at short notice. We will gladly enter your name on our "preferred list of stockholders" to receive a copy of this booklet as soon as it is issued, if you will send us your business card requesting us to do this. It will pay you to be on our mailing list.

## Order From Stock

To the practising optician who works at his bench, or has assistants to do it for him, and to whom every order is something that is regulated to a certain extent by the personal wishes of the customer, it may appear an easy matter to make a slight change here and there from regular patterns. It was, twenty-five or thirty years ago, when the majority of manufacturing operations were carried out by hand and the accuracy of

## "Trial Sets and Frames"

Second Edition

A complete reference work of the most complete line of trial sets

We'll exchange a copy for your business card



Your jobber will gladly quote you prices on the goods shown in this or any of our other catalogues



# Amoptico



the fitting of the various parts was largely dependent upon the skill of the workman. The man at the bench was frequently responsible for designing improvements in the parts and was capable of putting them into practice himself. This is still true today, so far as the invention of improvements by the workmen is concerned, but before they can be marketed, an

intricate and expensive set of tools must be designed and made in order that the new parts may be economically turned out on a commercial scale.

Automatic machinery is the keynote of present day manufacturing and without it the highly finished small parts, accurate to the thousandth of an inch, would not be commercially possible. They would cost too much to make by the old methods to admit of their being generally marketed. Consequently, all small parts are turned out by machinery, in some cases involving a considerable investment, and nothing is left to the discretion of the workman. Every piece goes together with the other parts to a nicety, so that practically the only hand work today is in the assembling of the finished article, and the numerous rounds of inspection to which it and its component parts are subjected.

The moral is plain—order from stock as often as possible. Just because a customer thinks a slight change would be an advantage, don't promise to have it made up specially. It may be an utterly trivial alteration—nine times out of ten it is. Quite as often as not, carrying it out might be a detriment instead of



## A Useful (Patented) Bifocal Set

With this set you can test for reading just as you would for distance, without changing the adjustment of the trial frame or removing the distance correction.

The small reading segments, (18 mm. in diameter) occupy the correct reading position and can be brought *in* to allow for convergence. Round segments help you to increase your sales of Opifex and Kryptok bifocals.

Each set contains twelve pairs from +.50 to (-3.25 D.), 38 mm. (1½-inch) rings.

Case is leather covered and attractively lined. The cost is so small that no optician's equipment is complete without a set.

At a slight extra charge these sets may be furnished with etched foci on lenses.

Your wholesaler will be glad to show you samples and quote prices.







Just a few of the many hundreds of styles of  
spectacle and eyeglass cases



## Spectacle and Eyeglass Cases

The materials in the order illustrated are:

Imitation Leather

Gray Silk

Genuine Morocco (Finger-piece style)

Black Enamel

Polished Aluminum

Imitation Silk

Morocco with button (Finger-piece style)

Carved Leather

Your jobber carries a comprehensive stock and will quote prices

With your name on the back of your wish



# One Hundred and Fifty Thousand Automobiles

will be sold  
this year



Are you prepared to sell your share of the many thousand pairs of goggles that will be needed?

These are only a few of the large range of styles we offer.

All made in strict accordance with the AOCo standards of quality.

A booklet describing the entire assortment is yours for the asking.

From it you can order directly from your jobber.

an advantage. You are the judge of this, and a little diplomacy will usually be sufficient to persuade the customer of her mistake (the "her" is used advisedly). Fully three-quarters of the special orders could be filled with something from stock with greater satisfaction and a better profit to all concerned. Order from stock whenever you can consistently do so.

## Display Your Goods

Dead stock means money uselessly tied up. The oftener you can turn your complete stocks over, the fresher they will be and the better business you will do. So figured the crossroads storekeeper who invented the motto: "If you don't see what you want ask for it." But human nature is so constituted that many things are not wanted until they are seen. The article itself creates its own demand. But it cannot do this if it be hidden away in a stock drawer or up on a shelf. Consequently, the Yankee storekeeper's sign did not work as well as he anticipated. When a customer is seeking a certain article, it will naturally be asked for. But it is a matter of common experience that there are many things in the optician's stock that are seldom directly asked for.

Suggestion is effective to a certain extent, but a sign stating that you have certain articles in stock is but a weak substitute for an attractive display of the goods themselves. If they are shown, they will sell with little assistance. Department store salesmanagers were the first to take advantage of the weakness of human nature to buy things on the impulse of the moment, just because they were attractively displayed. Probably 25 per cent of the total sales of some of these large establishments are due to progressive methods in display alone, and the optician who wishes to show that he is alert might well take a leaf from the book of the department store window dresser.

Make an attractive display of your wares inside and out, in the show window and in the store. Change it as often as you can. The optician is more or less hampered in this respect, due to the rather limited range of stock carried, but there are many opportunities for a good display, and an attractive showing not only attracts new customers but actually sells goods every time. Don't fall into the rut of some of the old-timers whose establishments become landmarks to the passerby due to the unfailling monotony of their out of date window display. Above all things change the appearance of your show windows with sufficient frequency to avoid the slightest suspicion of staleness, even if it be necessary to employ the same articles in a different way. A layer of dust in a window will take the snap out of the best display ever made.

## Make Things Pleasant

Some people are never patient, no matter how plausible an excuse you may have for keeping them waiting and no matter what provision you may make for their comfort. They are the exception, however. The average person does not object to waiting a short time. It is a small matter to provide comfortable and roomy chairs, a table with the current illustrated magazines, and, with their aid, there need be no fear that impatience will get the better of your customers, if you cannot attend to all of them quite as rapidly as you would like to.

Go a step further and add an attractive writing desk with appropriate stationery for the use of those who have to wait. Many will take advantage of the opportunity thus afforded to make good use of time that would

otherwise be spent in waiting. Free local telephone service is another inducement that will often be appreciated and will result in making friends for the house.

These are not visionary schemes, but expedients which many opticians the country over have adopted to make their establishments attractive to the prospective purchaser. Some will doubtless abuse the privileges thus afforded, but they will be relatively few. Magnifying their shortcomings to a degree that makes it appear unprofitable to attempt to provide for the comfort of the majority, is a short-sighted business policy that many opticians indulge in. This accounts for the great disparity in the appearance of different establishments found in various parts of the country, and often in the same city. Needless to add, the most attractively fitted places not only present an air of prosperity but always have a larger number of customers in them, which conclusively shows that the public generally appreciates the effort made to provide comfort and is not slow to take advantage of it.



Waiting in Comfort and View—President's Room

Amoptico Building

American Optical Company





## Modern Shop Equipment

Are you still working with old and out of date tools? A skilled workman can make a good job under difficulties and without complaining that his tools are poor. But it is costing him twice as much to do it and the result can never be as satisfactory as if he had the proper appliances for the work. In the present state of development of machinery and tools for the making and repairing of optical goods, no establishment is too small to be properly equipped in this respect, particularly in view of the extremely moderate outlay required.

For the use of small shops, we have just brought out a new hand lens drill, which not only does good work but which sells for very little. Every part is carefully machined and substantially mounted so that

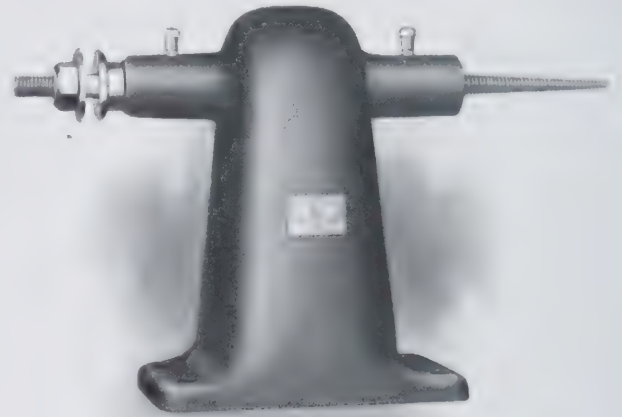
that might otherwise involve the inconvenience of regrinding the lens, not to mention the risk of breakage.



No. M 99. New A. O. Co. Hand Lens Drill

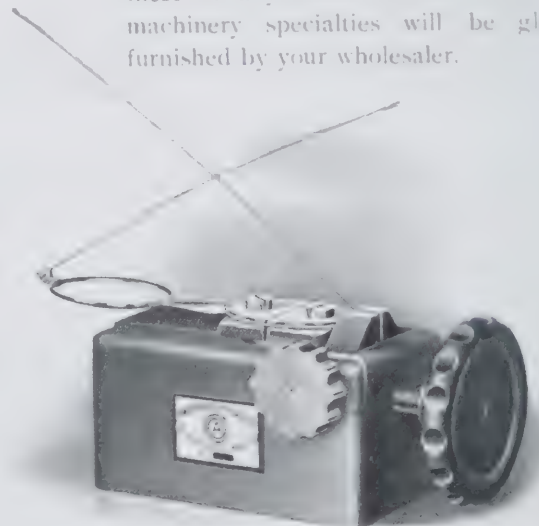
the drill can always be depended upon to do accurate work. The mechanism is mounted on a broad and solid base, cast integral with the pedestal, and may be screwed down on the bench. The drill holder is ordinarily furnished with a steel drill point, but is designed to take the regular A. O. Co. diamond drills. An interchangeable flat and pointed lens rest is provided.

A very ingenious and useful bench tool for prescription shops is the new A. O. Co. eye-wire stretcher shown in the accompanying illustration. It is designed to stretch the eye-wire of frames to take lenses which may have been edged slightly oversize. Its range of movement is such that it may be employed to stretch the largest or smallest frames and will be found a great time-saver for the busy optician, as it accurately accomplishes in half a minute an operation

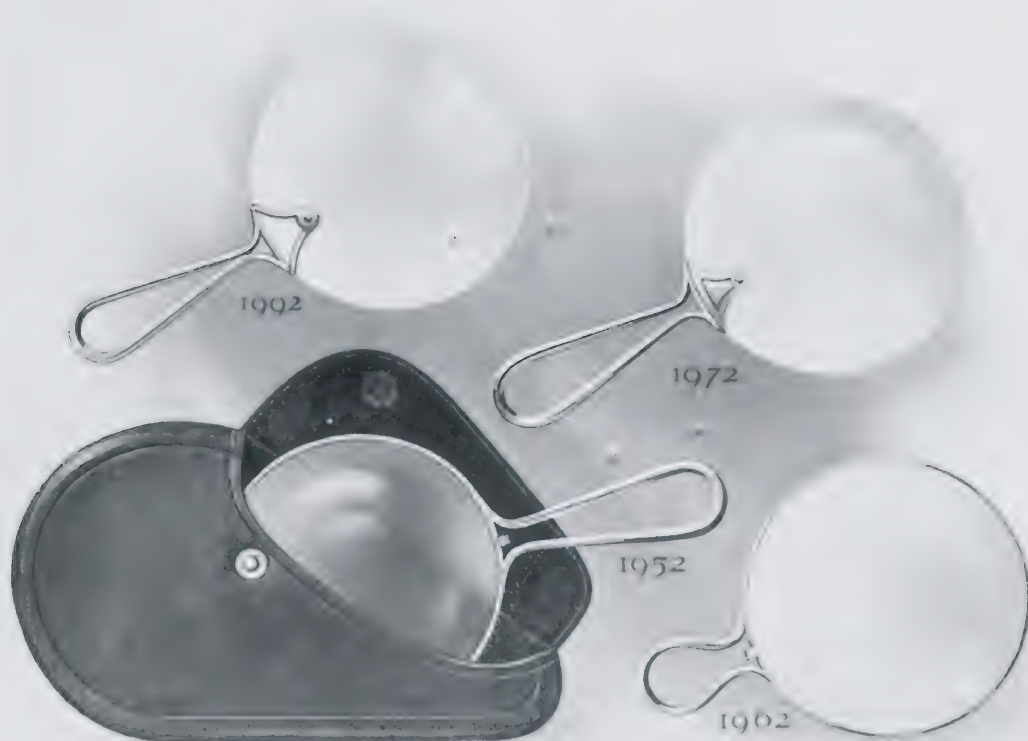


No. M 131. A. O. Co. Dustproof Polishing and Butting Head

Here is a new type of polishing and butting head, the advantages of which will be apparent at a glance. No belt in the way with its dust and dirt spreading possibilities. Instead of being placed outside, as is usually the case, both the pulley and the belt are almost entirely housed in, being effectively protected by the same casting which forms the base and standard of the head itself. The left end of the spindle is recessed to take the A. O. Co. No. M162 rounding tool for finishing glass screws. All of these machines are accurately and substantially made and are attractively finished. Further information and prices concerning these or any other of the A. O. Co. machinery specialties will be gladly furnished by your wholesaler.



No. M 209. New A. O. Co. Eye Wire Stretcher



More people have use for a reading glass than you have any idea of—but the goods must be shown.

## AOCO "Magniscopes"

are accurately made and attractively finished. Moderate in price too. They'll do more than half the selling themselves, if you'll show them

German Silver \*

Gold Filled

		German Silver *		Gold Filled	
Thickness	Focus	With Rim	Rimless	With Rim	Rimless
1/8 inches	16" D.	1942	1962	1972	1992
1/4 inches	13" D.	1942	1962	1972	1992
3/8 inches	8" D.	1942 1/2	1962 1/2	1972 1/2	1992 1/2
1/2 inches	6.50" D.	1943	1963	1973	1993

Your wholesaler will quote prices. Order by catalogue number



# American Optical Company



New York



London



Chicago



Southbridge, Mass.

# Amoptico

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at Southbridge Massachusetts

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No. III







CATALOGUE  
OF  
OPTICAL MACHINERY  
TOOLS AND  
SUPPLIES

READY JULY FIRST

Your business card will bring a copy

American Optical Company  
Southbridge, Mass.

New York

Chicago

San Francisco

London

# Amoptico



## An Industry That Aids The Eyesight The Making of a Lens



JUST when man began to imitate nature by manufacturing lenses for the multiplication of his vision is something that history has never definitely established. It seems quite probable that the early Egyptians made use of magnifying glasses, as some of the jewelry unearthed in ancient tombs shows carving so delicate that its beauty is almost lost to the unaided eye.

This would make it appear

that lens-grinding was practiced thousands of years ago. If this be the case, it was included among the "lost arts" for many centuries, as it was not until the Middle Ages that it was revived. In fact, the modern history of lens-grinding begins with the invention of spectacles, or eyeglasses, in the sixteenth century. Naturally it was many years before anything more ambitious than the grinding of a single lens at a time by hand was attempted.

Crown glass constitutes the material employed and one of it suitable for spectacle lens making is produced in this country. Practically the entire supply of high grade lens glass comes from abroad. It is received in the form of disks, or pieces a little larger than the lens to be made. This glass comes from abroad in various shapes and sizes, ovals and rounds for spherical lenses, and squares with rounded corners for cylinders and

torics. It is also imported in sheets from which special shapes and sizes can be cut. For lenses having strong curves, moulded blanks are used. These are made by subjecting disks of the proper size and weight to high pressure in steel dies while the glass is plastic, to give the approximate curves required. Hundreds of thousands of these lens disks are constantly kept on hand in the storage rooms.

The glass used for Centex and other lenses by the American Optical Company is a special stock made expressly for the purpose and is all important. It is extremely hard, white, free from striae, and of uniform index of refraction. In fact, the spectacle lens of today is made from better glass than was to be had for the finest optical instruments of a half century ago.

The first operation consists of inspecting the blank for defects, such as the slightest veining or indication of unequal density, termed "striae" which would render the glass unfit for lens purposes. The blanks must also be carefully gauged for thickness, down to a fraction of a millimeter. This must be done to insure accurate uniformity of thickness. The preliminary gauging of the blanks is performed by an automatic machine. After being examined for defects, the disks are placed in a tube from which they are automatically distributed into a number of different metal boxes according to their variation in thickness, the dimensions of each lot in millimeters being marked on the corresponding box. This machine gauges the disks to  $\frac{1}{16}$  of a millimeter.

As the cost of the glass is a very large item of expense, it is obvious that the gauging is an important operation. If the disks are thicker than necessary, this item is greatly increased, as is also the time required



# Amoptico



Tons of glass disks from which lenses are made

to grind the lenses to the proper thickness. What is of even greater importance, the finished lenses would not be of a uniform or standard thickness.

Before any of the actual operations of lens-grinding are carried out, it is absolutely necessary, in the case of moulded blanks, that the glass be thoroughly annealed. This is done by placing large quantities of the blanks in huge ovens where they are brought to a certain temperature. The latter is maintained for a certain period and the lot of blanks is then allowed to cool very slowly. The annealing operation is performed to free the glass from any internal stresses between its molecules that may have been set up when the disk was moulded. This is a very delicate operation, requiring great expertness and judgment to perform properly.

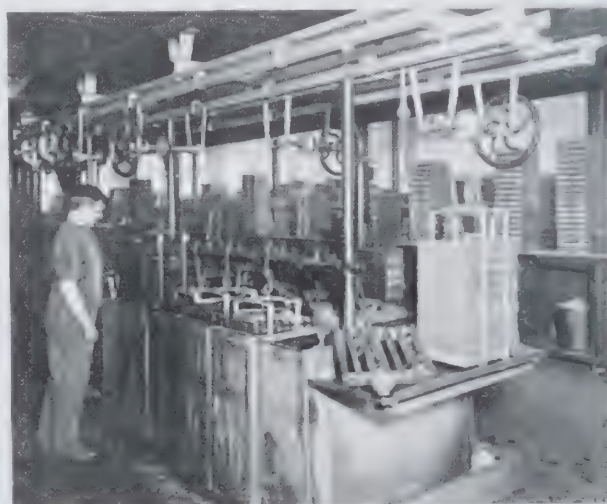
So far, the material has been spoken of merely as disks. This of course, is what they are, but aside from the variations of thickness for which different lots have been selected, there are also dozens of classes of blanks, corresponding to the various types of spectacle lenses that are to be manufactured from them, such as spherical, cylindrical, toric and others, not to mention the great range of thickness there must be to provide for the making of lenses of differing powers. The very finest are selected for the making of the Centex lenses. After the various operations of inspecting, gauging and annealing with its subsequent inspection, have all been gone through, the disks are ready to be ground.

It would manifestly not be commercially practicable to grind one lens at a time, as the optician does in his workshop. Large numbers of disks of the same class are accordingly ground at once—the weaker the lens, the greater the number that can be produced on one

block. To hold it while being ground, the disk is mounted on a heavy iron block. The form of the latter depends entirely upon the class of lens to be produced. For ordinary spherical lenses, it represents a surface segment of a sphere, differing in curvature with the power of the lens desired, and for very weak lenses a comparatively slight departure from a flat surface. For cylindrical lenses, the holding block represents a section of a cylinder, the latter again differing in the same manner, from which it will be evident that a very varied assortment of these blocks must be employed to produce the thousands of combinations of surface curvature required for the correction of visual defects.

The glass disks are attached to the iron blocks by means of a special pitch compound with which the surface of the block is coated by being placed face downward into an iron bowl of corresponding opposite curvature, previously provided with a proper amount of molten pitch. This gives it a uniform coating of pitch of the desired thickness which rapidly cools and solidifies. A number of the lens blanks have been heated in the meantime by placing them on an iron steam-plate. When hot enough, these blanks are pressed into the pitch and upon cooling adhere firmly. When covered with disks, properly mounted, the block is elevated to the floor above, where the grinding machines are located, by means of an endless chain carrier.

The grinding machines are immense affairs, each weighing upward of eighty tons. They consist of long rows of vertical spindles centered over cast iron laps, corresponding in form to the blocks. The inner faces of these laps are smooth and the glass is ground against them with emery as the abrasive



Lens washing to remove foreign matter from the glass surfaces



Storehouse and Water Tower, Lensdale

medium, by an eccentric rotary motion of the two faces against one another. The first grinding operation is carried out with the aid of coarse emery, which serves to remove most of the superfluous glass and to give the face of the blank approximately the curvature

desired. It is then subjected to second and third grindings with finer grades of emery, each stage of the operation requiring specific time for its completion. Polishing is similar to grinding, except that the lap is replaced by an iron polisher lined with felt, and instead of emery, a very fine grade of special polishing compound is used. Several hours are consumed in each operation. If the latter have all been properly carried out, one face of each of the blanks has been ground and polished to the proper curvature. The work is then removed from the machines; the blocks and their disks are inspected for any improperly ground or otherwise defective disks. The lenses are removed from the block. If defective they are thrown out; if not properly ground, they are remounted and go through the process all over again.

Those disks that have been properly ground and polished on one side are again mounted with the other surface exposed, and the process repeated.

It would naturally be out of the question to attempt to cover the entire subject of lens grinding in a limited space, as there are a great many operations necessary to the manufacture of a perfect spectacle lens after the completion of the grinding and polishing. These will be treated in the following issue.



Southern End of Lensdale Works



# Amoptico



"Opticians' Trial Sets, Trial  
Frames and Accessories"

American Optical Company  
1917



Vol. 1

June, 1910

No. 3

Published Periodically

By

American Optical Company  
Southbridge, Mass.

## Co-operation

Despite the tremendous strides made in recent years in this direction, it has become increasingly manifest that both the wholesale and the retail optician suffer to a greater or less extent through inability to keep closely in touch with the production end. Information concerning new things is not distributed as quickly or as generally as should be the case. The retailer is naturally the chief sufferer, as not alone novelty, but frequently "seasonableness" has the most important bearing on the advisability of stocking a new article. It is of small value to the retailer to learn of new fall goods, when he is in the midst of holiday trade, or of spring novelties when that season is either well under way or already past.

The optician who is so located that he can neither visit his wholesaler nor be called upon by the latter's representatives at frequent intervals, stands small chance of being kept in that close touch with the market which makes quick turnovers of stock possible. In a territory of such extremely widespread extent as that represented by the United States and Canada, it will be apparent that there must be many who are so situated.

To remedy this state of affairs is one of the chief purposes of the publication of *Amoptico*. Through the medium of illustrations taken from photographs of the articles themselves, it is easy to show what the new things are. The mails will place *Amoptico* in your hands, whether you happen to be situated in Florida or Alaska. It will enable you to keep track of new things as well as your more fortunate confrere who does business in a large city. Instead of waiting for the wholesaler's representative to call upon you with samples, you can request your jobber to forward samples and prices of any of the AOC's goods shown. As a result you will not alone have an opportunity to keep your stock right up to date with goods that would ordinarily only have reached you very much later, or which in many cases might not have been brought to your attention at all.

It is our purpose to co-operate with every optician in this manner by mailing *Amoptico* as often as it appears. While AOC's products consist of a very wide range of standard goods that are known by their trade marks the world over, new things are constantly being added and in no other way can they be brought to the attention of the trade so quickly and so generally as illustrating and describing them here. While these first issues of *Amoptico* are of interest to you, they are but the forerunner of better things to come. See that your name is on the AOC's mailing list.

## New AOC's Chicago Headquarters

Considerably more room was found necessary than the offices in the Chicago Savings Bank Building afforded and the AOC's Chicago headquarters have accordingly been removed to The Peoples' Gas Building, 150 Michigan Avenue, which not alone provides ample room with every facility, but is also a more advantageous location. This office will be in charge of our branch manager, who is thoroughly conversant, not only with the AOC's products but also with the optical trade and its requirements.

A complete sample line of AOC's products will be displayed, and information concerning them may be had through this branch office without the delay and inconvenience that would otherwise be incurred through the necessity for corresponding with the factory.

The benefits of this system will be extended to the New York, San Francisco and London branches as well, and the saving in time and annoyance that will be avoided with their aid will undoubtedly be appreciated by the optical trade generally.



## AOCO Emery and Supplies

Success in lens grinding is not altogether dependent upon the skill of the operative. A good man can turn out excellent work under difficulties and without complaining of the inadequacy of his equipment. It is usually the poor workman who blames his tools. Half a century ago, the devices in use were crude and cumbersome and much of the material was of doubtful utility, when viewed in the light of present day standards, but some remarkably accurate and slightly work was turned out. The same thing was true a hundred years ago, and is equally true to-day. The good workman will produce satisfactory results with whatever is at hand. But it is extremely poor policy to



Grinding and Polishing Materials

compel him to work against odds of this nature. You have to pay for it in more ways than one.

This is not alone true of the tools and appliances with which he works, but likewise of the materials. To most opticians "emery is emery." They are too content to work with the ordinary article themselves and to supply it to their assistants. Simply because nothing better has been obtainable in the majority of cases. As one of the largest manufacturers of fine spectacle lenses in the country, we have learned by long experience, the true value of both up-to-date appliances and good materials. One is of small help without the other. In the grinding of thousands of dozens of lenses annually, it has been brought to our

attention very forcibly that "emery is not always emery" by any means. But the optician that does his grinding, is not always in a position to obtain materials of exactly the nature desired, even where he realizes the shortcomings of those he has hitherto been compelled to work with. Simply because the market afforded nothing better.

Our knowledge of the difficulties of proper lens grinding with an abrasive of indifferent quality, and particularly where the latter is not uniformly graded, has led to the marketing of the AOCO brand emery especially for optical use. This is the same material as is employed in the grinding of all AOCO lenses and is prepared in the same manner as for our own use. As shown by the illustration, both the AOCO emery and the special polishing compound used in finishing lenses is packed in five pound tins of convenient size. These and other supplies of a like nature are all listed and illustrated in the new AOCO catalogue, "Optical Machinery, Tools and Supplies." Copies of this will be forwarded upon request, and any representative wholesaler will quote prices.

## Early Optical Publicity

Those opticians who are confirmed believers in the potency of printers' ink will be interested in the following advertisement which appeared in "*A Collection for Improvement of Husbandry and Trade*" by John Houghton, F. R. S., St. Bartholomew Lane, behind the Royal exchange, London, 1693:

"Whereas Generally the Spectacles that are made and sold in England, are Irregular, because the Tools they are made with are so: Now there is found out a new way of making the best sort of Spectacles that are true Sections of Spheres, as cheap as the best Irregular ones used to be sold for. I have enquired of those who are extraordinarily skilled in opticks, who confirm the same, and think they deserve to be encouraged.

"These are to be sold by John Marshall at the Sign of the Archimedes and Spectacles in Ludgate Street, London."

This publication, a weekly news sheet, contained no advertisements when first issued in 1692, but began them in 1693 with the quaint heading on each advertisement sheet of the paper: "Advertisements." "This part is to be given away, and those who like it not, may omit the reading. I believe it will help on Trade, particularly encourage the Advertizers to increase the vent of my Papers. I shall receive all sorts of advertizements, but shall answer for the reasonableness of none unless I give thereof a particular Character on which (as I shall give it) may be dependence but no argument that others deserve not as well."

## Keep Up with the Times

Conditions of life long ago reached a degree of complexity where it would appear to be well nigh impossible for any innovations to further increase the disadvantages under which the eye must work. This was thought to be so true fifteen years ago as to admit of no argument. But it is only necessary to review the past decade to note what revolutionary changes have been brought in that short period. During that time, three new and widespread enemies of good eyesight have come on the scene. They are the automobile, the underground railroad and the ubiquitous moving picture show. Ten years ago, no one of the three was a factor in the daily life of even a small fraction of the population. To-day, their influence can scarcely be estimated. In 1898, a pair of automobile goggles could not have been bought in this country at any price and there were doubtless few opticians who could have filled a special order for a pair. Now many thousands of dollars worth of them are manufactured every year.

During the same period, the underground railroad has become a very popular means of city travel, and

the moving picture show has spread itself abroad over the entire face of the land. Both have added in no small measure to the daily eye strain of a very large fraction of the population. So much so, that it only remains for some bright practitioner to coin a suitable term for the ills that follow long concentration upon the wavy, flickering picture, or the result of too much reading in subway trains. Many people dislike to wear goggles when automobiling, and the pressure of the wind against the eyes when traveling above twenty miles an hour can hardly be regarded as beneficial as there is a considerable quantity of invisible dust present in the air even on the clearest day. Others will wear goggles day after day without giving the lenses a thorough cleaning. Both practices induce eyestrain of a nature that has yet to be definitely diagnosed.

These are changes in the conditions of daily life to which the optician should be keenly alert as they have an important bearing upon his business. It remains to be seen whether the airship will add another to the list, but if it should, as is apt to be the case, this must be taken into account as well.

## Seasonable Sellers

Every fourth man who visits an optician at this time of the year is looking for a pair of goggles. There are few things whose entire stock of which can sell more this summer.

See that you have a business-setting assortment. Ask your wholesaler to show you samples and quote you on the AOCO line—the most comprehensive range of styles you have seen.







CENTEX

ONLY the first selection of the product of the best known spectacle lens-glass makers in Europe is imported for the manufacture of

CENTEX  
Lenses

Maximum clarity, uniform hardness and density, and good color are the result of years of experience and unequalled facilities.

The raw material is the very best that skill and money can produce.

The standards of scientific accuracy guaranteed under the registered name and trade-mark CENTEX are made possible by the rigid requirements imposed through every stage of lens manufacture from the preparation of the optical glass itself to the selection of the finished lenses.

American Optical Company

Southbridge, Mass.

New York

Chicago

San Francisco

London

CENTEX



## AOCO Special Styles of Temples

When machinery was first adapted to the manufacture of temples, the difference in the precision and finish of the product, as compared with those formerly made by hand, marked an advance so great as to make it seem



AOCO "Perfex" Temples

impossible to improve upon them to any great extent. But a comparison of the temples of to-day and those manufactured when machinery was first introduced, shows an equally striking departure from former methods. There appears to be no lack of room for improvement and doubtless what is considered the acme of perfection to-day, will in time be supplanted by something so much better as to give rise to wonderment why such a standard as that now followed should ever have been considered acceptable.

In the course of manufacturing large quantities of such goods, we have developed a number of styles which mark an advance over those formerly in general use. From these there have been selected for illustration here, the "Perfex", the patented solderless cable style and the "Comfort" riding temple. They are distinguished by advantages of construction or style from those ordinarily employed, and as they have met with a widespread demand, should be carried in stock by every optician. Simply because it is easier to sell them at a more liberal margin of profit, and with far greater satisfaction to the wearer, than a nameless temple which has nothing in particular to recommend it.

For example, take a frame with the usual ball tip temples and compare it with an AOCO "Perfex" pear tip temple frame. You cannot fail to note the difference at a glance and when the same opportunity to make comparisons is afforded your customer, he

will choose the "Perfex" temples, not alone on their appearance, but on account of the greater comfort they afford. These are not the only advantages they hold, either for you or the customer. Examination will show that all "Perfex" temples are of one-piece construction. No solder is employed in their manufacture and this not only means metal of a uniform temper from end to end, but temples that will hold their shape and will not discolor. The one-piece construction in gold-filled also gives an even gold covering over the entire tip, making the latter as durable as the remainder of the temple and insuring uniform wear of the whole. Experience has shown that they give superior service on this account — so much so that they will in time supersede the usual ball tip construction.

As the name implies, the "solderless" cable temple represents another important improvement in construction. It has grown in favor steadily, in preference to the usual type in which the cable is soldered to a solid



AOCO "Solderless" Cable Temples

butt. The new construction supplies a solid butt, one end of which is drilled out. The cable wire is inserted in the hole and subsequent swaging grips the wire so tightly that it cannot turn or loosen.





## Little Things That Sell Quickly

## AOCo Automatic Eyeglass Holders

(Patent Applied For)

### Black Enameled Front, enameled back

- No. 100A Plain design, German silver chain  
No. 101A Plain design, gilt chain

### White Metal Front, bright or satin finish, nickeled back

- No. 220A Plain design, German silver chain  
No. 220B Plain beaded edge, German silver chain  
No. 220C Shield design, German silver chain

### White Metal Front, grey finish, nickeled back

- No. 221A Plain design, gilt chain  
No. 221B Plain beaded edge, gilt chain  
No. 221C Shield design, gilt chain

### Gun Metal Front, black-nickeled back

- No. 331A Plain design, gilt chain  
No. 331B Plain beaded edge, gilt chain  
No. 333A Plain design, gun metal chain  
No. 333B Plain beaded edge, gun metal chain

### Gold Plated Front, bright finish, gold plated back

- No. 551A Plain design, gilt chain  
No. 551B Plain beaded edge, gilt chain

### Coin Silver Front, bright or satin finish, nickeled back

- No. 620A Plain design, German silver chain  
No. 620B Plain beaded edge, German silver chain  
No. 620C Shield design, German silver chain

### Gold Filled Front, bright or satin finish gold plated back

- No. 751A Plain design, gilt chain  
No. 751B Plain beaded edge, gilt chain  
No. 751C Shield design, gilt chain

These are only a few of the styles to be listed. Others will be added shortly.

Fully covered by the AOCo guarantee.

Which means that they are properly made with a durable mechanism, good action, an even stop and an exact tension.

Your wholesaler will quote prices.

A notable advantage of the patented solderless construction of cable temple is the uniformity of spring temper from butt to tip which is impossible in the usual construction. With the absence of solder there is absolutely no tendency to corrode at the butt. Solderless cable temples are furnished without extra charge and will be supplied on all grades of gold-filled frames and mountings when specified.



AOCo "Comfort" Temple

These cable temples are furnished with either flat or round butts.

Many who have tried spectacles find that their use results in a great degree of discomfort with the ordinary type of temple. In your practice as an optician, you will run across frequent instances of this and no amount of adjustment of a stiff wire temple will suffice to overcome the objection of the wearer to the irritation caused by the pressure of the loops and the temple ends. Such cases afford an opportunity for you to recommend the "Comfort" style of temple, as above illustrated. These temples are made with a cable-loop and ball tip of large diameter and the cable itself is very soft and flexible, while the butt is of the usual solid construction. The wire of which the butt forms a part, extends half the length of the temple where it is firmly swaged to the "Comfort" cable-loop.

## Prescription Goggles

It is decidedly inconvenient for a great many people who cannot do without glasses to be compelled to wear goggles over them; while in other cases, goggles may be so carelessly made that their lenses will prove a detriment to an already defective vision. To overcome these drawbacks, we are marketing a special style of goggle in which prescription lenses may be fitted in place of the usual plain glass. The frame is so designed that the goggles have a rigid front when open, holding the lenses in perfect alignment.

The illustrations show two styles. One with an ordinary elastic band No. 3066 and the other with temples No. 3068. They can be furnished with grey or brown trimmings in either style, and with bridges of three different widths, that is, 10, 13 and 16 m m. This allows of fitting for pupillary distances and permits the lenses to be correctly centered. When properly fitted such goggles are quite as comfortable as the best spectacles. They can be furnished with or without cases.

It will be apparent to any progressive optician that by giving a little attention to a specialty of this kind there is quite a bit of business to be built up along this new line.



## Only a Few

Of a very extensive assortment of styles in gold and gold filled that will serve to give you some idea of what an attractive line of hairpins is manufactured under the AOC's trademark. An equally wide range of chains to match. Your jobber will show samples of the complete line and will quote business-getting price.





## Some New Things

Under this heading, it is our intention to publish in every issue of Amoptico, illustrations of new goods as they are brought out, in order that the optician may be kept informed of developments. From time to time every optician has inquiries for certain articles, which he not only does not carry but which he has never stocked. Consequently, he cannot assure the customer whether the article is actually on the market or not. He must appeal to his wholesaler for information on the subject, and in case the latter does not happen to have the goods in question, he must in turn write to the manufacturer to find out whether they are to be had,



New AOC Co Polished Aluminum Spectacle Case  
No. 329, Pol., Patent Self-closing

This is a lengthy process which many opticians would prefer not to undertake.

Among the new things considered worthy of mention in this connection are two additions to the already extremely extensive line of eyeglass and spectacle cases. The first of these which is illustrated both open and closed, is a polished aluminum self-closing spectacle case. To our knowledge, this is the first of the kind to be manufactured in this country, although aluminum has now been employed for this purpose for some time. It has the advantages of considerably less weight and bulk for its size, while the metal itself is proof against corrosion.

To meet the demand for a case to carry spectacles with the extra large lenses that are now being worn to

a constantly increasing extent, we have brought out the style shown in the accompanying illustration, No. 377. In designing this case, particular attention has been devoted to keeping its outside dimensions as close as possible to the limits actually required by the spectacles it is to contain in order to minimize its bulk and make it convenient for the pocket. Gauged by the glasses it is made for, this is an unusually compact case. Both this as well as the polished aluminum spectacle case illustrated here are of the self-closing type. The workmanship and material throughout are in keeping with the established AOC Co standard.

If you are interested in either of the above items, write your wholesaler to that effect, with the additional information that the article in question is an AOC Co product. The style number given in the illustration will identify it definitely, and if you will state further when requesting information on new lines the issue of Amoptico in which the article you are seeking appeared, it will be easy for your jobber to send you samples and quotations without delay. You can also enjoy the advantage of keeping in touch with the market instead of having to wait for information of this nature through the usual channels.

## Two New AOC Co Catalogues Ready

Attention is directed to announcements appearing on pages 2 and 6 of this issue of Amoptico with reference to the new AOC Co Catalogues.

### Optical Machinery, Tools and Supplies

This catalogue is very complete, containing forty pages of up-to-date appliances for practical optical shop work, nearly all the goods being illustrated. It is not alone for the man who contemplates the installment of complete shop equipment but also for he who conducts a shop already equipped, for in this catalogue are listed tools and supplies which are needed in everyday practice.

### Opticians' Trial Sets, Trial Frames and Accessories

The second edition of this catalogue is now ready. Many new styles in test cases are shown and other new goods have been listed and fully described. The trial set is the most important item in the refracting outfit and our catalogue will show you many styles from which a selection can be made.

Both catalogues will be sent free to optometrists or oculists who write us requests on their business stationery or enclose business card.


## The Merits of a Good Case

Every time you sell eye glasses or spectacles you deliver them to your customer in a case. Is it a good case, well made and nicely finished, and with your name attractively stamped on it? Or is it just a holder, something of cheap material poorly put together? There is probably more penny wise and pound foolish policy indulged in where cases are concerned than any other single item in the optical business. So many opticians regard the matter in an entirely erroneous light.

"Cases are given away. We get nothing in return for them. Therefore, buy the cheapest cases obtainable." This seems to sum up the usual argument. Its fallacy lies in the "we get nothing" part of it. Nothing could be further from the truth. When you give your customer a case made of cheap scrap leather, poorly put together, it is done under the delusion that you have saved a few cents a gross on those cases as compared with a well-made article. But you haven't. Apart from the cheap appearance of the case, even when brand new, its wearing qualities are the worst advertising your business could have.

Your name is on the case, so that when the paper thin covering cracks and peels, the lining works loose, and the whole case becomes totally disreputable, the customer has constantly before him a reminder of your standard of doing things. If you make a practice of putting your glasses in such cheap cases, how can he be sure that the accuracy of your prescription work itself is any higher? This is the most direct and natural deduction. The poor case reflects directly upon your way of doing business and is a detriment to you. When you have succeeded in greatly pleasing your customer with the glasses provided he shows them to his friends. That is when a well made case with your name attractively stamped on it shows to the best effect and does you the most good.

AOCO cases are made for that purpose. The excellence of their material and the care with which they are finished is the same as that characterizing all AOCO products. When you hand a customer an AOCO case with your name stamped on it you are advertising your business in the most effective manner.

AOCO cases all bear this  trademark stamped on the back, and they do not cost you any more than the nameless article. Ask your wholesaler to send you the new AOCO self-closing cases on your next order. They represent an improvement which we thought important enough to protect by patent.



AOCO Spectacle and Eyeglass Cases  
Patent Self-Closing Styles

Made in these sizes and carried in stock at the factory and all branch offices:

Style	Price	Description
703-1	703-1	Regular Eye Glass Case
704-1	704-1	Regular Eye Glass Case for Small Faces
705-1	705-1	Large Eye Glass Case
706-1	706-1	Large Eye Glass Case for Tones
707-1	707-1	Regular Riding Bow Case
708-1	708-1	Regular Riding Bow Case for Tones
709-1	709-1	For Finger Piece Eye Glasses. (Carried on the cover.)
710-1	710-1	Large Riding Bow Case for Tones



# American Optical Company



New York



London



Chicago



Southbridge, Mass.

# Amoptico

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Read in this  
Issue—

Kryptok Suggestions  
The Thorington Prism



## AOC Co Trial Sets are Preferred the World Over



Illustrating No. 2511 Mahogany roll top; closed.

Illustrating No. 02511 Oak roll top; open, with all-wood tray. See page 12



## Talks with the Practical Optician

### Kryptok Suggestions

The increasing sale of Kryptoks leads naturally to a widespread desire among all opticians for further information regarding the selection and making of these bifocal lenses.

The following article tells in a clear and concise fashion how to select the right numbered blank, and what precautions must be observed in surfacing it. We recommend that these suggestions be followed closely, and we believe that the optician who does take advantage of them will find them exceedingly valuable.

Kryptok blanks made by AOCo are now being regularly supplied with both surfaces clear. This is an advantage that can be readily appreciated by the optician who realizes that thorough and careful examination of each lens is made easy. Any lens must undergo a thorough and searching scrutiny before it is passed by the AOCo force of inspection; flaws that under other circumstances might get by because any inspector was unable to see them can now, with clear surfaces on both sides, be easily detected.

This is without doubt a forward step that any optician can and will value highly.

*Selecting the required Kryptok Blank.* First decide on the form of the finished lens, whether Toric or Flat. Next determine the required curve on the Disc side. Find this curve in the Vertical Column on the AOCo Chart marked "Curve on Disc Side," using the Toric or Flat chart as necessary. Next find the reading addition in the Upper Horizontal Column marked "Addition Required."

Where these two columns cross each other will be found the number of Blank required. This can be readily understood by verifying the following examples, all of which have +1.00 Distance with +1.50 Reading Addition. (*Note.* The Reading Addition in all cases is understood to mean the

Power actually *added* for reading and not the total power of the reading portion.)

If in Dex form (Disc side curve +.50) use Blank No. 30.

If in Pex form (Disc side curve +2.25) use Blank No. 23.

If Meniscus Cx form (6.00 Base) (Disc side curve +7.00) use Blank No. 329.

If Meniscus Cx form (9.00 Base) (Disc side curve +10.) use Blank No. 817.

If Plano Cyl. form (Disc side Plano) use Blank No. 32.

*Caution. Never Grind a Cylinder on the Disc Side.*

*Blocking a Kryptok.* Select a block adapted to the lens to be ground. If the lens surface next to the block is flat or nearly so, the block should be flat. If the lens surface is curved, the block should be curved. Briefly stated: The layer of pitch between the lens and block should be of uniform thickness at all points and never less than  $\frac{1}{8}$  inch thick. This applies particularly to the final blocking of the lens for grinding the second surface and if heeded *will avoid* a lot of *breakage*.

Heat the blank *gently* and avoid *sudden changes in temperature*. After blocking allow the blank to cool thoroughly before commencing to grind.

*Grinding a Kryptok.* *Always grind the disc side first*, using rough emery (M301) simply to remove surplus glass. With smoothing emery (M302) reduce the diameter of the disc to within 2 mm. of its finished size if a high addition, or 4 mm. if a low addition. With finishing emery (M303) reduce the disc to its final diameter. Great care should be taken to obtain the best possible finish with the fine emery, otherwise too much is left to the polishing, and the disc will not only show a wavy surface but will tend to polish flat, thus changing the reading focus.





In fining the lens with M303 emery, run the emery down until it is worn out or dead, being careful not to carry the process too far, which would allow the lens to rub on the iron and scratch the surface.

Before surfacing the second side locate and dot the required optical centre of the distance portion and crumb the blank until the optical centre is equally distant from opposite edges of both the long and short diameter. Then grind the opposite edges to equal thickness for each respective diameter. This will locate the optical centre of the distance portion at the point desired.

We recommend a distance of  $1\frac{1}{2}$  mm. from the upper edge of the reading portion to the optical centre of the distance portion.

*Polishing a Kryptok Lens.* Use piano felt, printers blanket or closely woven serge cloth. For polishing material we recommend our M308 rouge which is put up wet ground in 5-lb. cans. When polishing very weak additions, it will be found that the disc will reduce slightly in diameter.

Avoid excessive pressure. On the disc side it tends to polish the disc flat. On the second side it is liable to break the lens.

*Picking off a Kryptok Lens.* The lens may be chilled in cold water but must be cooled slowly, as sudden changes of temperature will crack a Kryptok owing to the difference in the expansion of the crown and flint glass. After cooling, to remove the lens, tap it carefully around the edges with a piece of hard wood. After removing it from the block, clean with turpentine.

*Table of Minimum Thickness.* (Diam. of Disc 19 mm.) The following table shows the *Minimum thickness* of a finished Kryptok measured at the centre of the disc. If ground thinner than the figures given the flint disc will be exposed on the second side and the lens destroyed.

Addition	Min. Thickness		
.50	.3 mm. or	$1\frac{1}{2}$ points	
1.00	.6 " "	3 "	
1.50	.9 " "	$4\frac{1}{2}$ "	
1.75	1. " "	5 "	
2.00	1.1 " "	$5\frac{1}{2}$ "	
2.25	1.3 " "	$6\frac{1}{2}$ "	
2.50	1.4 " "	7 "	
2.75	1.6 " "	8 "	
3.00	1.7 " "	$8\frac{1}{2}$ "	
3.25	1.9 " "	$9\frac{1}{2}$ "	
3.50	2. " "	10 "	
3.75	2.1 " "	$10\frac{1}{2}$ "	
4.00	2.2 " "	11 "	

(Note. The points referred to in above table are the  $\frac{1}{32}$  mm. graduations on the M197 Spring millimeter gauges in common use.)

*Cutting a Kryptok Lens.* Carefully locate and dot the optical centre of both distance and reading portions, also the axis of cylinder if any. Place the lens on an oval diagram, and after properly locating the axis and optical centres as required, trace the oval on the lens with a pen and ink. Cut to the oval with a *good diamond*. A *poor diamond will break good Kryptoks*. We can supply diamonds and cutting machines especially adapted for Kryptok work.

*Mounting a Kryptok Lens.* When drilling use a *sharp diamond drill and light pressure*. If your drilling outfit is not in proper condition *call on us*. Do not cramp or strain the lens in mounting. *Broken Kryptoks are expensive*. The Colmascope will show up any strain sufficient to break a lens.

*Fitting a Kryptok Lens.* To avoid colors. Use the Toric form of lens and tilt slightly if necessary, in order that the wearer shall look squarely through the reading portion. The astigmatic effect of oblique vision through a lens is much greater than is generally supposed and is much more pronounced through the reading than through the distance portion.

Convergence requires that the reading portion should be "decentred in" a certain amount in order that the wearer shall look through the *optical centre* when reading.

For pupillary distances ranging from  $2\frac{1}{8}$ " to  $2\frac{1}{2}$ " the following figures are sufficiently accurate:

For 10" reading distance, decentre in  $1\frac{3}{4}$  mm.

For 12" reading distance, decentre in  $1\frac{1}{2}$  mm.

For 14" reading distance, decentre in 1 mm.

By attention to the precautions noted the loss by breakage and other causes will be reduced to a minimum and profits on Kryptoks correspondingly increased.

## How to Photograph Window Displays

The best results can be secured by a time exposure at evening with the window lights on and the store interior dark. Care should be taken to wait until long enough after sunset for all reflection to leave the glass.

To obtain a sharp impression of the goods and of the printing on display cards, special attention must be paid to focusing.

When the store is wired for electricity it is worth while to place two or three bulbs at each side of the window, their glare shielded from outside by the frame and their light thrown back against the display. You can then do away with your overhead light, which makes good pictures difficult and does not light a display so well for the evening spectator.

Any number of people can pass between a window and camera without affecting a time exposure, *provided they keep moving.—Exchange.*



It resolves itself into this. There must be a definite goal ahead for us both. That goal is *More and Better Business*.

From an investigation that we have made on moving picture advertising, the average charge made by theatres for displaying slides is about \$1.00 per week, the prices ranging from 25 cts. to \$2.00. This is a question that has been brought up by many of our friends from time to time, who wish to go into lantern slide advertising but are rather hesitant about it, since they do not know exactly what it will cost. An interview with the manager of your local "picture show" will get you all necessary information and rates.







## The Thorington Prism

We are pleased to offer at this time a new prism for use with Trial Sets. This is the invention of Dr. James Thorington of Philadelphia, the well-known authority on refraction, and has just been put on the market by us.

The use of this prism is amply described in Dr. Thorington's new book, "Prisms, Their Use and Equivalents," which has lately been published.

The new prism is made of one piece of glass which may be either Ruby red, Cobalt blue or colorless, and is ground in two 7 prism dioptries separated by an interval of plain glass 3 mm. wide. It will be known as the Thorington Prism and can be purchased from all jobbers dealing in AOC's goods.

The following description will give the oculist or optometrist a clear and concise idea of what this new prism will accomplish. It will be easily seen what advantages may be gained with the use of this device for measuring muscular imbalance. The Prentice system of Prism Dioptry is used in connection with the new prism to define its values, so that anyone who is accustomed to measurements in the Prentice system will be under no disadvantage in making use of the Thorington Prism. (Dr. Thorington defines it as a truncated prism.\*)

In corresponding with Dr. Thorington regarding the manufacture of these prisms to his standards for color and optical specifications as trial case accessories, he writes us the following interesting description which we are privileged to print

"The reader will appreciate the fact that when a point of white light (the one centimeter round opening in the iris diaphragm chimney) is looked at through a Thorington colored prism, the eye sees

a central colored light with an image above and another below equidistant from it and these three lights connected by a streak or band of light.

"The resulting images produced by these colored prisms are distinctive from the single white light seen by the fellow eye. When the prism is so placed before the left eye that it sees the streak and three lights either in the vertical or horizontal meridian, it does not matter which, and the white light seen by the right eye is superimposed on the central colored light then there is orthophoria for distance. If the white light is to the right of the central colored

light then there is esophoria; if to the left then there is exophoria; if above then there is left hyperphoria; if below then there is right hyperphoria; if above and to the right then there is hyperesophoria; if above and to the left then there is hyperexophoria.

"It must be appreciated at once that no matter whether the streak and three lights occupy the vertical or horizontal meridian the diagnosis of the variety of the insufficiency is always determined by the position of

the white light relative to the central colored light. Furthermore, bearing in mind that this prism is made up of two 7 prism dioptries, the patient's statement of the position of the white light relative to the central colored light furnishes an approximation of the amount of the insufficiency, for instance when the streak and colored lights are in the horizontal meridian and the white light appears to the right and midway between the central and right colored lights, then there is  $3\frac{1}{2}$  prism dioptries of esophoria. If the white light is super-imposed on the colored light to the right, then here is an esophoria of seven prism dioptries, etc. The Thorington prism certainly fills a long felt want as a delicate and



No. 1860, Metal Disc  
(Large opening)

No. 1860, Ring  
(2 1/2-inch Handle)

No. 1860 in 1801 Style  
Test Ring

exact test for muscular insufficiencies as it produces the combined effect of the Maddox rod and double prism in one piece of glass with the very important addition of a central light as a starting point for measurements."

We are ready to supply this prism in the Ruby red, Cobalt blue or colorless glass, mounted in the regular No. 1801 trial ring or with a convenient handle for the patient or operator to hold.

All leading jobbers are selling the Thorington prism and will speedily fill any order.

Always specify in your order whether you wish the prism Ruby red, Cobalt blue or colorless.

Specifications as to ring or handle must be given.

## Thorington Truncated Prism.

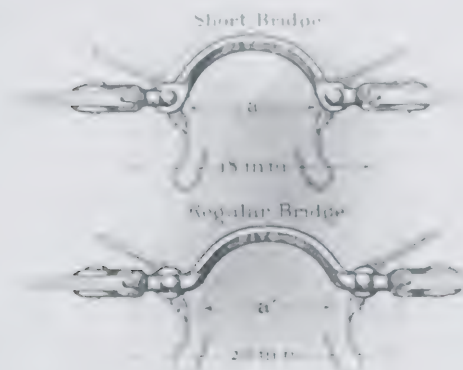
Cat. No.	Description	Price Each
1869	Prism in No. 1801 Style Ring	\$2.00
1869	" " " 1806 " "	2.00
1869	" " " 1812 " "	2.25
1869	" " " 1821 " "	2.25
1869	" " ring, 2 1/2" handle	2.50
1869 A	" " Metal Disc (small opening)	2.00
1869 B	" " " (larger opening)	2.00
1869	Prism, edged, no ring	2.00

\*"A cone or pyramid whose vertex is cut off parallel to the base by a plane."

"The April number of *Amoptico* at hand and we assure you that it is a most welcomed visitor." Tucker & Ganes, Hugginsville, Mo.

## Popularity of the Short Bridge Fits-U

Before announcing the patented Short Bridge Fits-U in the September AMOPTICO we had stocked a large quantity of these goods in anticipation of the demand, but we very soon found out that the supply was by no means adequate in the face of the insistent call springing up in every part of the country.



Comparative distance between lenses for regular and short bridge (patented) having same base measurement.

Every optician is realizing that the small lens is becoming a thing of the past, and that strong as is

the demand for large lenses now, it is still weak in comparison to what it will be within a few years.

The use of small lenses can be avoided in two ways only, either by the decentration in of the large lenses or by using a short bridge. Any optician can appreciate the advantage of using a Fits-U Short Bridge rather than decentering.

The illustration shows plainer than any description just what this saving means. As you will see, the Short Bridge Fits-U saves almost 2 mm. in the pupillary distance of an eyeglass. A 00 eye lens with the new Short Bridge Fits-U gives a slightly shorter pupillary distance than the regular bridge with an O eye lens.

The Short Bridge is supplied on the regular Fits-U styles. In ordering, it is only necessary to place a cipher in front of the catalogue number of the guard to secure it. For instance, if you order a No. 03101, you get the Short Bridge Fits-U with No. 3101 Guard.

A new system of dimension numbers is in use for these goods and was given in the September AMOPTICO.

All jobbers supply patented Short Bridge Fits-U's at exactly the same prices as for the regular bridge; that is, \$7.50 per dozen for the 1/10 12K Gold Filled, and \$16.50 per dozen for the 10K Gold.

## Interest Displayed in Toric Window Displays

Swamped absolutely. We expected of course that the Toric Window Display illustrated in the February AMOPTICO would be popular with opticians who appreciate the value of live advertising, but at that we were hardly prepared for the rain of requests that poured in on us from Eastport to San Diego and from Duluth to El Paso. In fact the storm was so heavy that it almost cut off our line of communication for a while.

We've repaired all the bridges now, however, and we have just a few more sets on hand that will do a lot more good displayed in your windows than they will here in the AOC's Factory.

The price is just the same, \$1.00 for the complete set, and \$.25 for the cards alone. Write to your jobber *at once* to make sure of getting your set.

We should be pleased to receive photographs of windows in which these displays are used.

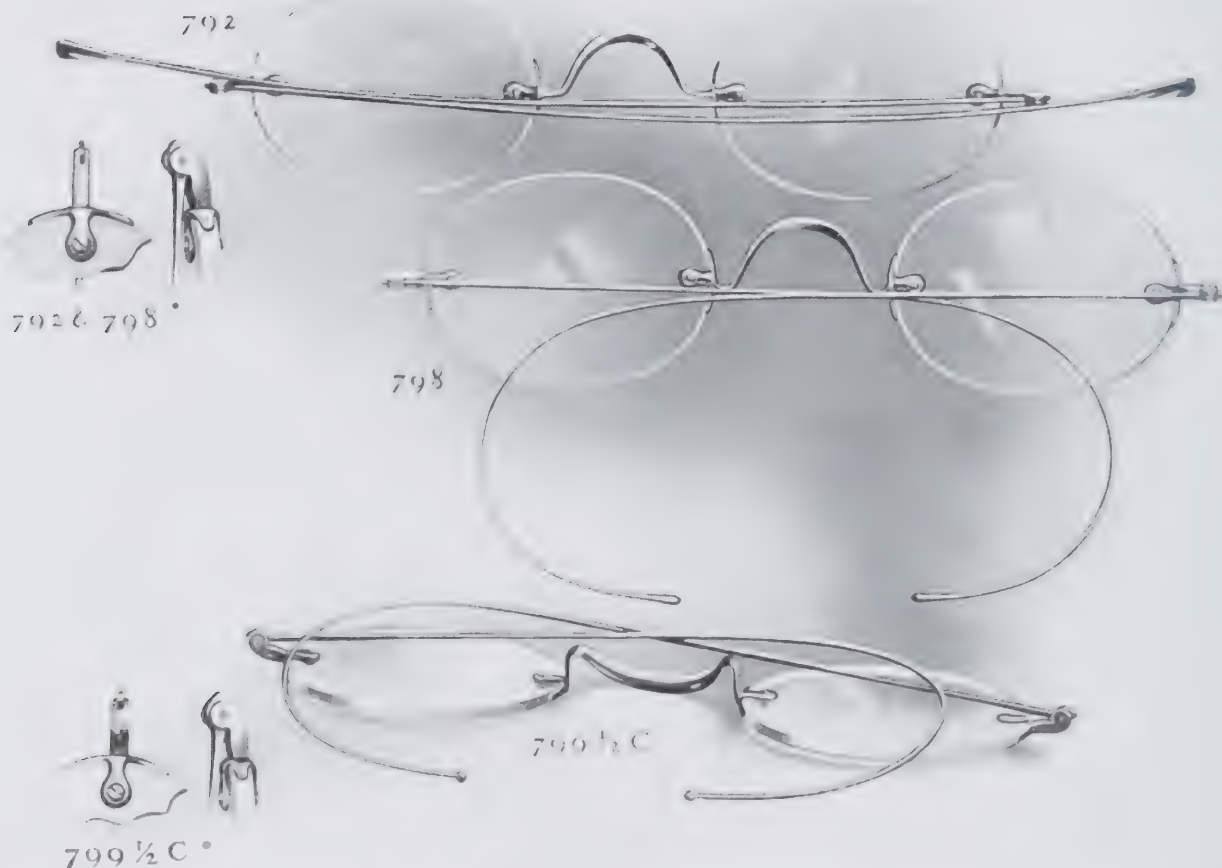
"I fixed up my window to-day making a fine display of the outfit you sent me. It makes a beautiful and instructive showing." C. Curtis, Los Gatos, Cal.





# Amoptico

## AOCo Gold Rimless Spectacles



### Make the Most of Your Golden Opportunities

To the optician the question of selling gold goods resolves itself into a matter of profit. If there is more profit in selling gold goods, you will sell gold; if there is more in selling gold-filled, you will sell gold-filled.

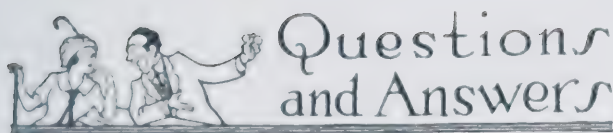
In this whole matter the patron's opinion or preference is usually not expressed, for in a business which has its basis in the idea of personal service the person receiving that service is more than likely to do exactly as the one directing the service advises. You will all agree that this is true in the optical business, since the person whom you are serving knows practically nothing of what you are doing. He has only a vague idea of the

properties of lenses, and the devious mysteries of refraction are indeed hidden from him. When you get past that stage and down to the real merchandizing proposition, he is still under your influence and will do as you say. If you advise the purchase of gold, the chances are that you will sell gold. If, on the other hand, you advise gold-filled, there are at least the same chances that he will buy gold-filled. The entire matter is up to the optician and seldom to the patron.

It has been demonstrated time and time again by opticians in every part of the country that it is just as easy to sell gold as it is to sell gold-filled, and the affair hinges upon whether the optician wants to sell gold or gold-filled. He can sell what he will.

Take the case of Gold and Gold-Filled Fits-U's.

(Continued on page 9.)



Here is a good problem. A customer wrote in and wanted to know how to tell what cylinder to use to grind an oval lenticular of a given length, width and diopter value. It works out as follows:

Find the depth of curve of depression of lenticular for both long and short diameters, using rule 1 in "Simple Rules for Lens Calculations." (See AMOPTICO, January, 1912, or booklet, "Talks with the Practical Optician.") Subtract the lesser from the greater, and let this difference be thickness  $t$ .

Let the square of the short diameter be represented by  $d^2$  and the dioptry value of cylinder required by  $D$ .

$$\text{Then formula is } D = \frac{t}{d^2}$$

Example. Wanted oval lenticular — 6 dioptry depression 20 mm. long by 16 mm. wide. Required Cylinder to use.

$$\begin{array}{r} \text{Depth of curve of long dia. by rule 1 is} \\ 10 \times 10 \times 6 \\ 1000 \end{array} = .6 \text{ mm.}$$

$$\begin{array}{r} \text{Depth of curve of short dia. by rule 1 is} \\ 8 \times 8 \times 6 \\ 1000 \end{array} = .384 \text{ mm.}$$

$$.6 - .384 = .216$$

$$\text{Short dia. } d = 8 \text{ mm. and } \frac{8 \times 8}{1000} = .064 = d^2$$

$$D = \frac{t}{d^2} = \frac{.216}{.064} = 3.37 = \text{diop. value of required cylinder.}$$

NOTE. Dimensions  $t$  and  $d$  are assumed to be in millimeters.

We have a few more of those letter head cuts advertised in the January issue of AMOPTICO which we will be pleased to send to optical dealers who desire them at the same rate as before. For 65c. we send you the single color plate, while for \$1.30 we send you two plates for two-color work. You should send the money to your jobber or have him charge the cuts to your account. Let him order them from us for you. These plates give every satisfaction and are an ideal way for the optician to advertise, not obtrusively, but effectively.

Specimen letter heads in one or two colors showing how any printer can make *your* stationery look, will be mailed *free* if you ask for them.

## Perfex Pear Tip Temple



The day is past when the wearer of spectacles always had a sore spot behind the ear, for the Perfex Pear Tip Temple removed the cause of that.

The making of pear tip temples from gold-filled stock was a tedious and heart-breaking task. Time and time again machines were made only to be thrown in the junk heap. One man worked for five years unceasingly on this proposition, and yet even in that long time did not succeed in solving it. Finally, however, after all the disappointments, the long sought for end was accomplished, and now the AOCo is supplying Perfex Pear Tip Temples in ever increasing quantities.

Do not confuse the ordinary pear tip with the AOCo Perfex style. The Perfex Temple is imitated, but it is the AOCo method of making the pear tip that guarantees service and wear.

Young people as well as old have to wear glasses, but it is usually only the old that have to wear bifocals. Show them bifocals which look like ordinary glasses and you have clinched your sale immediately. No further argument is really needed, although for your own peace of mind, and to show your own salesmanship, there are innumerable arguments which you can bring forward to support your claim of personal appearance. There's a good profit in Kryptoks, too. Specify Kryptoks made from AOCo blanks.

## Magic Glasses for Lefty Louie

Charlie Monroe tells this one. It seems one day a well dressed gentleman casually dropped into his office and stated briefly that our genial Massachusetts State Board chairman had been recommended to him as a clever and resourceful optometrist, and therefore he would like to ask a few scientific questions.

Of course, our friend, who could not be daunted by legislative committees, mentally rubbed his hands in expectation, and hoped it would not be too easy.

"Well, what I want," said the stranger, "is a special pair of glasses by which I can see marks left by certain chemicals not discernable to the naked eye. No hurry about it. Take your time. Here's ten dollars for experimental work. Soon as you need any more write me. My card. Good day, sir."

Before there was any time to ask questions the man had vanished. At intervals thereafter Mr. Monroe, his interest and curiosity aroused, tried in vain to work out the problem. From the man's address it appeared that he resided in a large western city. One day several months afterwards he unexpectedly "blew in" again. "Well, have you worked it out?" he asked quickly. "No, not yet," answered Mr. Monroe.

The stranger was about to produce another ten-dollar note. "Wait a minute," Mr. Monroe said, "I've been tinkering on this subject some time. Before I do any more I'd really like to know what would be the use for such a discovery."

"Don't mind telling you, if you'll keep it quiet. You see, I'm a gambler, professional, as it were. I want to be able to mark the backs of a pack of cards and read my opponents' hands with those spectacles you are going to make. See?"

"Yes, I see," remarked Mr. Monroe dryly, "but there's nothing doing here. Good afternoon."



TRADE MARK  
**OVALEX**

PATENTS PENDING

# Eyeglass Mountings

# Fits-U

Manufactured by  
American Optical Company

WE anticipate a demand for a fingerpiece eyeglass having guards actuated by a ribbon type of spring with coils winding around one another like a watch spring. Experts in our experimental department have tested and studied the many types which have been offered in the market. In their judgment none of these forms even begins to compare with the regular coil spring Fits-U for tension, action and service by which the value of a mounting is measured.

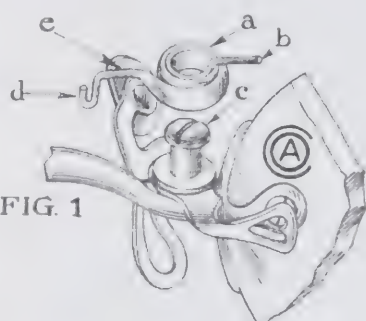


FIG. 1  
Detail construction of the genuine OVALEX Fits-U Spring

Showing how spring may be removed without taking out post screw

A direct outcome of our research and experimental work is the invention of an entirely new spring construction, expressed in the OVALEX Fits-U, which we now announce.

The OVALEX spring is a happy thought — an inspiration. It embodies the elementary good feature of the ribbon type of spring and does away entirely with the shortcomings of similar springs which lie in the flat surfaces and sharp edges. All these styles are oblong in cross section, while the new Fits-U Ovalex is a modified *z*-bar.

We proved the strength of an Ovalex Fits-U Mounting by subjecting it to a mechanical manipulation for 72 consecutive hours in our experimental department — *over three million times* — on an automatic machine; there was not even the slightest



The OVALEX Fits-U Eyeglass Mounting

The OVALEX Spring is a good-looking, inconspicuous spring.

EVERY dealer who now sells the coil spring Fits-U knows that it is the best mounting he ever saw or used. Every dealer who sees the Ovalex Fits-U is going to be just as enthusiastic as we are about it. Remember the Ovalex Fits-U is made with the new patented Short P. D. Bridge with our favorite Fits-U Guard—whether it be 3101, 3103, 3112, 3123, 3151 or 3161.

## OVALEX FITS-U PRICES:

1	10	12K	Gold-filled	.	.	.
1	10	14K	Gold-filled (Amoptico Line)	.	.	.
		10K	Gold	.	.	.
		14K	Gold	.	.	.
1	10	12K	Fitting Sets of one dozen mountings with etched lenses, in case	.	.	.

Order from any Jobber

## LIMITED SAMPLE OFFER

shown. Send us 75 cents in coin, stamps, check—any way you please and mention the return mail. This is a limited time offer only. We sell them through jobbers, and every

To put the Ovalex idea in  
Fits-U Mountings and are

# American Optical Company

New York  
San Francisco

# Fits-U

Exclusively by  
Fits-U Optical Company



TRADE MARK

# OVALEX

PATENTS PENDING

## Eyeglass Frames

indication of weakness or wear on the spring. We believe that we could have continued this heroic treatment to the extent of wearing out the bearings of the guard arms, one pair after another, almost indefinitely, without breaking or weakening the original springs. And, Ovalex Fits-U's have been worn by our own employees and by disinterested outsiders for months with absolutely satisfactory results: the maintenance of perfect tension, and never a break.

The OVALEX spring has another feature to recommend it. Its coils do not collect the dirt; from their very shape when coiled one around another they *expel* dirt or dust. This fact alone should cause the Ovalex Fits-U to outlast any ribbon spring type eyeglass in actual service.

The OVALEX SPRING can be put on without removing the post screw. The ends of the spring are rounded so that they may be easily handled with pointed pliers to change the tension or to replace the spring.

IF WE DID NOT KNOW that what we are asserting is true, we would not risk the world-wide Fits-U reputation for excellence by coupling the Ovalex with the Fits-U Mounting—would we? If we were not so enthusiastic about Ovalex Fits-U's we would not go to the extent that we have planned to advertise and demonstrate them—would we?

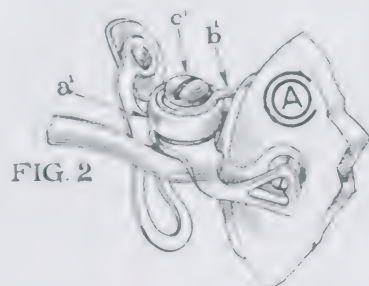


FIG. 2

OVALEX Fits-U Spring in Position

Showing in detail the construction of spring and method of attachment

with the popular No. 3112 style Guard

consequently the OVALEX Fits-U is a good-looking Eyeglass

Mountings, Frames and Fitting Sets with  
Regular Fits-U Eyeglass Guards

	Mountings	Frames
per dozen	\$7.50	\$9.25
per dozen	9.00	11.00
per dozen	16.50	30.00
per dozen	24.50	42.00

Fitting sets complete

each 8.00

THERE will be a big demand for Ovalex Fits-U's as soon as these announcements are out. Jobbers are already calling on us for big quantities, and our manufacturing resources will be taxed—we know it. Therefore, if you want quick action, put in your Fits-U eyeglass order *at once* and specify *Ovalex*. Don't hesitate or wait for your competitor to start it. Get your supply *now*.

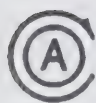
**Write for Fits-U Dealers' Helps**

before you in a practical way, we have prepared five thousand sample 1 10 12K Ovalex ready to mail one anywhere to the oculist, optometrist, or optician who wants to be the name of your jobber. You'll get a genuine AOCO Ovalex Fits-U Mounting by any jobber will have Ovalex Fits-U's and can take your order.

Chicago  
London

Southbridge Mass USA





## Coil Spring Fits-U's now \$7.00 a Dozen

With this issue of AMOPTICO we announce a radical change in the price of Fits-U  $\frac{1}{10}$ -12K Gold-filled fingerpiece eyeglass mountings. From now on, mountings of this style and quality will be sold by the jobbing trade for \$7.00 per dozen, a drop of \$.50 from the old established Fits-U prices for the same grade of material.

This is a change which will no doubt be welcomed by opticians generally, for it provides an opportunity for securing a stock of the most widely known and most popular fingerpiece mountings on the market for an extremely low sum.

At the same time the optician would do well to remember that Fits-U Mountings  $\frac{1}{10}$ -12K Gold-filled quality with the new Ovalex spring construction cost \$7.50 a dozen. This is the old price for the Fits-U Fingerpiece mountings with coil springs.

All jobbers are supplying these goods both in the old coil spring and in the new Ovalex spring, and the optician will have no difficulty in having his orders filled by his jobber for either style.

The established prices for coil-spring Fits-U frames and mountings are given here:

	1/10 12K	PER DOZEN 1/10 14K	10K	14K
Mountings complete	\$7.00	\$8.50	\$16.50	\$24.50
Frames complete	8.50	10.50	30.00	42.00
Fitting Sets complete	7.25	.....	16.50	.....

"The monthly magazine is always attractive and interesting. The display cards I have continuously in the show window. Business is picking up. The display cards and window signs help to sell goods as well as make an attractive display."

## Make Sure of the Goods You Buy

If at any time you are in doubt as to the goods which you have just received; if you do not find a trademark or if you think there is something wrong with the construction, finish, color or material, just send us a sample and we will have it assayed and otherwise inspected and will tell you just what it is.

AOCO goods are trademarked and quality stamped, and every stamp means that the manufacturing experience of eighty years is back of the stated quality at every step. You can't afford to use goods which fail to bear that mark. If you aren't acquainted with AOCO trademarks, let us know by all means and we will send you a copy of the AOCO trademark circular which gives all of our stamps and tells exactly what each is. May we not send you one?

"On the 24th inst. we received from you your new catalogue. The catalogue is a work of art and also the most complete one of this line that we have been privileged to see; it cannot but be very valuable to us as a book of reference and will help us in many cases of doubt as to what to stock.

Jordan & Son,  
Brattleboro, Vt.

## The Lens Dioptry

All AOCO Lenses are numbered in the generally known and accepted Dioptral system.

The unit of this system is a lens whose focal length for parallel rays is one meter. This unit is called a dioptry, usually expressed by the capital letter "D," thus: 1 D. A lens of twice this strength is said to have a focal power of two dioptries and a focal length of one-half meter; a 4 D lens has a focal length of one-quarter meter; a 0.50 D lens has a focal length of two meters, etc.

### Power and Focal Length of Lenses of the Dioptral System

Dioptral Power Dioptries	Focal Length Meters	Dioptral Power Dioptries	Focal Length Meters
0.12	8.0000	4.00	.2500
0.25	4.0000	4.25	.2353
0.37	2.6667	4.50	.2222
0.50	2.0000	4.75	.2105
0.56	1.7778	5.00	.2000
0.62	1.6000	5.25	.1905
0.75	1.3333	5.50	.1818
0.81	1.2308	5.75	.1739
0.87	1.1429	6.00	.1667
1.00	1.0000	6.50	.1539
1.12	.8889	7.00	.1429
1.25	.8000	7.50	.1333
1.31	.7619	8.00	.1250
1.37	.7273	8.50	.1176
1.50	.6667	9.00	.1111
1.62	.6154	9.50	.1053
1.75	.5714	10.00	.1000
2.00	.5000	10.50	.0952
2.25	.4444	11.00	.0909
2.50	.4000	12.00	.0833
2.62	.3809	13.00	.0769
2.75	.3636	14.00	.0714
3.00	.3333	15.00	.0667
3.25	.3077	16.00	.0625
3.50	.2857	18.00	.0555
3.75	.2667	20.00	.0500

### The Fable of the Ten Wise Virgins

Once upon a time there were Twenty Virgins sticking around to see the Bride and Groom pass down the line with the Orange Blossoms in the Bride's hair and the Bridegroom looking like a Last Year's Necktie on Easter morning. Ten of these Virgins were Wise and ten were Foolish and it was all a question of Lamps. Ten could see and see all right while the other Ten couldn't see a bit. The reason for all this was that the Ten Foolish Virgins had bought Somebody Else's Mountings, while all the Ten Wise Virgins had trimmed their Lamps with Fits-U's.

Moral: Always sell a Fits-U, not only for looks but because it's the best there is made.

The figures stand as follows:

10K Gold Fits-U	140-12K Gold-Filled Fits-U
Price per dozen, \$16.50	Price per dozen, \$7.50
Less 6 per cent., .99	Less 6 per cent., .45
\$15.51	\$7.05
Price per pair, 1.29	Price per pair, .58
Sale price per pair, \$5.00	Sale price per pair, \$3.00
Cost price per pair, 1.29	Cost price per pair, .58
\$3.71	\$2.42

Now, Mr. Optician, compare these two profits. You have the profit from the sale of gold goods of \$3.71, fifty per cent. more than the profit on gold-filled.

If you push this argument to the limit and make every sale a gold sale, you will find that your profits are considerably higher than they would be if you sold gold-filled and merely took a chance on making a resale.

Thrash out the whole matter and look at it from every point of view that you can discover, and we believe you will recognize the force of our argument.

Illustrated on the opposite page are some of the AOC's line of gold spectacle mountings. There is nothing sensational about their construction or about their design, but they have for many years been recognized as the best gold goods that could be produced.

As many of you know, eighty years ago when the American Optical Company came into existence, nothing but gold and silver spectacles were made. Since that time the manufacture of gold goods has been one of the most important, if not the most important branch of our business; and having been the pioneers in the manufacture, it is a matter of pride that we never lost the foremost rank.

The styles illustrated are our very familiar Nos. 792, 798 and 799½. No. 792 has a rounded end piece, round straight temple and solid joint. It is made in two weights; light and heavy. No. 798 has a riding temple with a rounded end piece and solid joint, and is made in five weights. No. 799½ has a beveled end piece and solid joint, with cable temples. This is made in two weights; heavy and extra heavy bridge.

Besides these, the AOC's line includes hundreds of other styles of gold spectacles and eyeglasses. Every jobber stocks these and will supply you with them at very short notice.

"I am using no other fingerpiece and guard than the Fits-U and use a lot of them." R. L. Leonard, Endicott, N. Y.

## Do You Use the Colmascope?



The AOC's Colmascope still maintains its lead as the most effective aid to the optician who wishes to make sure that every job leaving his shop is perfect. Any job which passes the inspection of the Colmascope can be relied upon as being free



The Colmascope (patent pending) No. M 121.

from any strain or stress which tight glass screws or imperfections in the glass may have caused.

The Colmascope is, as most opticians know, built of solid mahogany, and makes a very interesting and valuable addition to any office.

The Colmascope is supplied for either 110 or 220 volt currents. It is numbered M 121, and when used with 110 volt current costs \$18.00. For one to be used with the 220 volt current, the price is \$19.50.

All jobbers stock these instruments and can supply you at the above prices.

"The lantern slides have been used constantly since I received them and they are certainly getting the people talking about *Entic* and *uv*. The newspaper ads have helped, also, and I expect to continue both." Harry F. Myers, with Perry & Stone, New London, Conn.

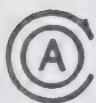
### Sales Suggestions for the Optician

The summer is a good time for the sale of set goods in Amber or Smoke glass. People who exercise outdoors, on the water, at the beach or anywhere that the blinding rays of the sun are reflected back into the eyes, find many uses for protective glasses of this kind. The AOC's styles in which these are made are many and very complete, and afford perfect rest and comfort to the eyes.

Any jobber will be pleased to furnish you with prices and complete descriptions upon application.

"We have been very much pleased with the topic window display and have had fine results from same. We have not had time to have a picture taken as yet but we still have the display in the window, we will have a picture taken next week, and will be glad to send you one." The Rx. Optical Co., Portland, Me.





## Flat-top Cases are the Most Practical

To almost everyone the chief objection to the usual self-closing case has been the inevitable bulge which the high cover causes when carried in the pocket. It is not possible to entirely eliminate this bulge, but case makers for years have been working along the lines of reducing it.

Without doubt, the first real step towards this achievement is the case illustrated on this page. As you will note from the end view of the case, there is no bulge in the cover, but the lines of the case form a very thin ellipse. This case is modeled on the idea of the popular thin Swiss watches.

**Old Style Case-High Domed Cover**



We confidently expect that the demand for this shape will be the largest for any one style that we have ever been called upon to meet, and we believe that it will be absolutely necessary for anyone wishing these cases to place an order as far ahead as possible (and then resolve not to be disappointed if he must wait for it).

**New Style Case-Flat Cover**



These cases are furnished covered with G, J, I and F leathers. Prices are the same as for our other self-closing cases covered with the same materials.

In material, construction, spring, covering and lining, the new flat top case is of exactly the same high standard as all other AOC's cases, by which you may realize that, strengthened by the new shape,



they will without doubt prove the most popular cases on the market.

The following cases are now made in this flat-cover shape:

*Steel Form. Aluminum Form.*

No. 705	No. 706	Small fingerpiece eyeglass
" 715	" 716	Large fingerpiece eyeglass
" 325	" 325-6	Spectacle

These cases may be lettered on the cover, which, since it is flat, is particularly adapted for such purposes.



**William A. Copeland**

The passing of William A. Copeland on March 14, 1913, takes from the optical business another remarkable personality.

For thirty years Mr. Copeland had been prominent as a manufacturer of jewelry and optical goods. Those who, in a business way, were privileged to come into contact with his life of great usefulness realized the high ideals and firm integrity which inspired his every act. Possessing a charming personal character, he gained a wide circle of friendships. His generous public spirit found expression in civic activities by which the people of Providence materially profited.

William A. Copeland was a natural organizer and leader in his chosen field of business. His splendid work as president of the New England Manufacturing Jewelers' and Silversmiths' Association and as a director of the National Jewelers' Board of Trade enabled him to accomplish much toward the advancement of the liberal policies of those great trade organizations.

We take this opportunity to pay tribute to his memory, for we shall keenly feel the loss of his influence in the optical business.



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 1833-1913

Channing M. Wells President  
 Albert B. Wells Treasurer

J. Cheney Wells  
 Vice-President and Secretary



General Offices and Works

**Southbridge, Massachusetts, U. S. A.**

New York : 15 Maiden Lane  
 Chicago : 122 S. Michigan Boulevard  
 San Francisco : 140 Geary Street  
 London : 39 Hatton Garden, E. C.

Cable Address: AMOPTICO, Boston  
 Western Union Code used

Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material  
 Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames  
 and Accessories, Automobile Goggles, Lenses  
 Spectacle, Eyeglass and Goggle Cases  
 Optical Machinery, Tools and Supplies, Etc.

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 Southbridge, Mass., U. S. A.

## Everyman's Advertising

Advertising has as many variations and combinations as a raw "rooky" with the manual of arms. And sometimes the most costly publicity brings the least returns.

There is one kind of advertising that costs you nothing in actual money, and which requires no cash investment. Yet don't think that it does not necessitate any expenditure whatsoever, for it does. It is the advertising you get by the good opinion of your patrons.

You've got to go after that good opinion. To go after it right requires an expert knowledge of the profession, a businesslike attitude, unflinching good nature, a clean, attractive office, a personal character above reproach, and a complete stock of the best goods obtainable. Then tend to business, and there's no reason why your trade should not multiply itself.

What the publicity that brings the large business costs you is only the labor and painstaking care that makes possible the fulfillment of the above requirements; it is mouth-to-mouth publicity, effective not from the point of view of volume, but from the cumulative value of repetition backed by the personality of the patron who praises your methods and your results.

To gain the greatest benefit from this kind of advertising you should know who among your patrons are the people that believe most strongly in your work. One way to do this is to find out from each new customer the reason why you, instead of some other optician, were chosen. Some will say because of your newspaper or picture show publicity, an attractive show window, the advice of a friend, or because of a combination of these or other reasons.

On the card record kept of every patron make some notation indicating the reason for his selection of your office. The uses for such remarks will readily suggest themselves. For instance, when you are getting out printed matter which you believe will appeal much more strongly to a certain class of your clientele than to another, you will be glad of this information.

But chiefly you will be glad to know who your most stalwart and loyal friends are; the friends upon whom, in reality, rests the success or failure of your enterprise. Increase your publicity agents as rapidly as you can. In the end make every one of your patrons a "big booster" for you and your organization.

"We believe that your campaign is doing wonders to further the call for American Optical Co.'s merchandise and we want to get in for all that we can of the benefits of same." Globe Optical Co., Tacoma, Wash.

## Why Manufacturers Go Mad!

The Pitiful Plight of the Country  
 Cousin; or, Does Advertising  
 Bring Results?

Here is what a correspondent wrote us on a postal card:

"Send me a pair of glasses and let me try them, and if I like them I will send the money. I have found a pair in the Saturday Evening Post that I like and I thought if you would let me try a pair and they suited me I would be responsible for the money. I have tried so many places and could not find the ones I wanted."

"I have already noticed an increase in Fitts' sales due to our moving picture ad. Thanking you for the above mentioned, I remain," H. Barnes, Brooklyn, N. Y.







## Over The Fitting Table



"Oh hum" said the optician, as he stretched out his arms and yawned, lying back lazily in his chair. It was just that kind of a day, hot and sunny, with scarcely anybody stirring who wasn't obliged to. The only live things were the horses' tails switching flies, and the dog's tongue as he panted just outside the door. The optician roused himself and looked at his watch.

"This will never do," he said, "here it is three o'clock on a nice Wednesday afternoon and nothing doing so far all day. The cash register hasn't made as much noise as a Dutchman on the 17th of March, and this store is about as lively as a cabaret show in Paris, Maine. I don't care if the thermometer is 99° in the shade, I've got to have some business, and if the people won't come to me of their own accord, they've got to be brought here, and I'm the guy' that's got to do it. Talk about bringing the mountain to Mohammed! That would be a cinch compared to dragging out business in the middle of the summer. But even so, it's got to be done and here's where I go to it.

"Well", he continued as he sat up and looked around the shop, "what's it going to be this time? I've pushed about every seasonable thing I could think of so far. Let's see, spectacles, eyeglasses, cases, Amoptiscopes—why there's nothing I haven't covered in some way or other. Wait a minute! What was it Mr. Jones said to me yesterday, he couldn't keep his eyeglasses on in this hot weather, and yet every day he wanted to be out playing golf? Why not boom Fits-U Specs right now? Yes sir, that's just it. Here's where I pull a bunch of Fits-U Spec business."

The rest of that afternoon the optician was busy with pad and pencil, jotting things down here and there. Anyone who watched him closely would have seen that in one hand he had a Fits-U Spectacle to which he constantly referred, and that right in front of him was a bound volume of AMOPTICO and an AOC's catalogue. A letter was sent to the AOC's asking for single column cuts Nos. A13, A15 and A19. That night the optician, instead of going to one of the beaches to cool off, sat down at his desk and worked until early morning on the copy for a new booklet. This copy was primarily intended for business men whom he had on his list and for every one that he knew liked out-door sports. It started in with the trouble that the wearer of eyeglasses has in keeping them on in hot weather. Then he took up the real comfort which the wearer of spectacles should find in being able to follow all kinds of violent exercise without the ever-present fear that his glasses will fall off. He showed the advantages of Fits-U Spectacles over the old style specs, and pointed out instance after instance from his own

experience of the satisfaction that wearers of Fits-U Specs had found. He showed how the Fits-U Specs relieved the nose by carrying the weight of the glasses upon the bearing pads at the side. This feature, of course, appeals to every optician, and the optician in his copy made it so plain that it appealed to his audience.

Then he pointed out how perspiration could not affect the solid 10K gold pads, the only point where any trouble might arise from the contact of metal with the skin.

He took his copy to a printer whom he knew to be reliable and told him to go ahead. Then he circularized his mailing list by means of this booklet and followed it up with a letter. Results were at first slow to show up, but inside of three or four days the tide turned and business began to come in faster. Before the week was out, the optician had been forced to make a hurry call on his jobber, for his supply of Fits-U Specs, large as it was and adequate as he thought for any business that might develop, proved far too small, and, indeed, several customers had to wait before they could secure their mountings.

After the *rush* was over, the optician was counting up the receipts of the day before, checking up the sales slips and bringing his records up to date, while his assistant was taking care of the constant trade in the outer shop. The day was just as hot as the other one had been. "Well," he chuckled to himself, "that's a pretty fair week's work and it will bring my month this year far above that of last.

"This only goes to prove that a good strong advertising campaign taken at the right time and with copy which takes advantage of what the people are thinking about will surely bring home the bacon. It's safe bet that it brought home a good bunch of dollars to me." He smiled reflectively, "I rather like this hot weather. Especially when I can buy Fits-U Spec bridges with 10K solid gold pads for \$7.50 a dozen, and sell them at a good profit."

## The Best Office Trial Sets

For use in the refracting room the optometrist desires only the best trial set, not only for convenience and completeness as to contents but also for appearance.

The two styles illustrated on page 2 are perhaps the finest office style cases: No. 2511, with roll front, two drawers, and a velvet-lined, removable tray; No. 02511, with all-wood tray. Either may be had in mahogany or oak.

The roll top on an office style case furnishes protection from dust and dirt which scratch and mar trial lenses, and which often interfere seriously with the examination of the patient.

The chief difference between these two is that one has a velvet-lined tray while the tray in the other is made of wood. There are many arguments for each. Those optometrists partial to the velvet-lined tray claim that there is no danger of

chipping of the lenses, and that there is less noise during refraction. Those who support the all-wood tray say that the velvet tray is unsanitary and is an eyesore to the patron. This is, of course, a matter of personal opinion.

These trial cases have 36 mm. lenses set in No. 1801 Alumnico Test Rings. The contents include 32 pairs of Sphericals, each Convex and Concave, running from 0.12 to 20.00; 20 pairs of Cylinders, Convex and Concave, from 0.12 to 5.50; 5 pairs of Prisms from 1.00 to 10.00; 10 disks and colored glasses; No. 2387 Wells Temple and No. 2220 Trial Frame; and one set of test types.

The prices of these trial sets through any jobber are as follows:

Cat. No.	Description	Price
2511	Oak, roll front case, velvet tray . . . . .	\$60.50
02511	Oak, roll front case, all-wood tray . . . . .	62.50

These cases are furnished in mahogany for \$4.50 extra.

## The Fits-U Saddle Bridge

Patent Applied For



The Fits-U saddle bridge spectacle No. 3611 which makes its first appearance with this issue of AMOPTICO is at the same time one of the most radical yet important developments in spectacle design, that has been offered to the optical trade. A glance at the illustration will enable the optician to see how widely this bridge differs from the ordinary style.

The idea of carrying the weight of the spectacle upon bearing pads, instead of the bridge itself, has been taken advantage of most successfully. The pads, of 10K Gold, are attached to the foot of the narrow stock SS bridge by a flexible looped arm, a modification of the familiar AO Loop. Needless to say, complete adjustability is thus secured.

This construction gives the bridge bearing pads the easiest and most simple adjustment of any on the market. The accompanying illustration shows a few of the many positions that the bearing pads can take. The completeness of this adjustability, is only rivaled by the ease with which it is accomplished. No tools are necessary except the fingers. Any optician can, with his fingers, make all adjustments and make them easier, quicker and more accurately than with any tool. No other spectacle bridge construction, of a similar kind, can offer this very evident advantage.

The pad itself is convex shaped and the bearing surface, rounded in such a way that the comfort of the patron, at all times and under any condition of wear, is made certain. Since the pad is furnished only in 10K Gold, long service is insured.

Full patent protection in this construction has been applied for. The No. 3611 Fits-U saddle

spectacle bridges, are stocked by leading jobbers, who will supply you at the following prices:

Cat No.	Description	Price
3611	Fits-U saddle spectacle bridges, 1 1012K gold-filled, 10K gold pad . . . . .	\$6.75
3611	Fits-U saddle spectacle bridges, 10K gold . . . . .	14.00



GEORGE A. BARRON  
Optometrist      Optician  
500 Blake Building      59 Temple Place  
Boston, Mass.

AMERICAN OPTICAL COMPANY,  
Southbridge, Mass.

Dear Sirs:

We want to take this opportunity to commend the very high character of AOC's Solid Gold Goods, which we have always found to be most excellent in construction and finish. This line has been used by us consistently for several years and is in every way perfectly satisfactory.

We believe from our own experience that the average optometrist is making an error not to sell more gold goods. A number of years ago our business was almost entirely gold-filled. We got the idea that we could get better satisfaction and make more money, carrying with us a more loyal line of pleased customers, if we urged in almost every case the purchase of solid gold instead. In putting this idea to the test we were surprised to note what a very simple and easy thing it was to do. As a direct result, our gold-filled sales are an exception. We have less bother after a frame or mounting has been once fitted, and our customers know that they have an article that will give them years of satisfactory service, while we make a correspondingly greater profit on every sale.

We have never had any reason to regret our policy in this respect as we conscientiously believe that in the long run we are saving our customers money, and our sales are eventually greater because of the advertising that is a direct result of satisfaction on the part of the public.

We do not think there is any mystery in this matter, as the idea can be followed out by any progressive optician, and this policy holds good with respect to the better lines of lenses as well as the better lines of frames. As much as anything else, the raising of the quality standard in optical goods on the part of the optometrist will have its effect on elevating the position which optometry will occupy in the eyes of the people.

I should like to see the American Optical Company do their part in furthering this idea, as I believe it is one which will work out to the best interests of manufacturer, jobber, retailer and consumer.

Cordially yours, (Signed) GEORGE A. BARRON





## A Mexican Movement: "Accelerato, Con Spirito"



Our idea of the pinnacle of precariousness was to have been in the city of Mexico during what some of the papers call "the late unpleasantness." From the letter reproduced below, which we received from a friend of ours in Mexico City, you may see that there was really something doing down there and that it wasn't one of these revolutions that wind up like a dollar watch and run about as long. This was a regular live affair with real guns and real shooting.

Our friend is certainly a man of misfortune. Anybody who went through the San Francisco earthquake and then stepped into the Mexican revolution is an object for pity. Apparently neither of these mishaps worry him greatly however, and with a disposition like that and the stick-to-it-iveness that he has, there's surely success awaiting him. Here's the letter and you can see for yourself how narrow a margin our friend had in his escape from the city of the Montezumas.

"MEXICO, February 23, 1913

"From what you have naturally learned from the newspapers it must not have surprised you, if, during these last two weeks you have not heard from me. In the midst of the confusion all that people could do was to get away with as much of their valuables as it was possible to carry. This of

course I did while in the store, and on the same morning when the riot started.

"Overcoming some of the most dangerous difficulties, such as passing through the firing line with my coach at full speed, I finally succeeded in reaching my home, in the Y. M. C. A., situated at three blocks from the "ciudadela," the rebels' stronghold. But nothing could I take away from my room as the Federals were approaching. It was a matter of escaping as quickly as possible and while I was doing so, the rebels were taking possession of the building, which, for its beautiful structure and height, offered them a splendid fortification. The upper stories of the building were totally wrecked and a wholesale stealing of whatever the members had went on during the twelve days in which the building remained in their possession. Not a thing they left, and whatever was of no use to them or could not be carried away they broke mercilessly.

"My loss reaches somewhat like \$2,000.00 U. S. C. Some of the most beautiful and costly souvenirs from all parts of the world have been stolen from me. Have had to start to buy all over again, and this makes the second time. The San Francisco fire thoroughly cleaned me out. Fortunately the store remained intact, and I have plenty of confidence in the future and myself.

"This is a great country; it has everything in its favor except the Mexicans, and if peace could only be established, there would be money for every body and plenty of it."

## Thirty Tons of AOCo Catalogues Arrive at Southbridge

A short time ago two box cars came into Southbridge filled to the roofs with the complete edition of the AOCo Catalogues.

Twenty years have elapsed since the first catalogue was issued, and a large part of that time was occupied in the preparation of the new one. The difficulties attendant upon the preparation and printing of such a book are known only to those who have attempted it. The extent and diversity of the AOCo lines has made the task a greater one, but we now believe we have the most complete optical catalogue and reference book that has ever been issued.

In physical appearance the book is covered in brown cloth with dark brown lettering. It includes 350 pages of type matter and halftone illustrations. Thirty tons of high-grade coated paper were used.

The book is now ready for distribution among those who are actively engaged in the optical business. One can well appreciate the fact that we must have some evidence showing this before sending out any catalogue. We are obliged to make a nominal transportation charge for the catalogue. This amounts to thirty-five cents and merely covers part of the cost of shipping it, as each individual book when packed weighs over four and one-half pounds. Stamps or coin for this purpose may be sent through your jobber or to us, together with a letterhead or business card, which will bring you a catalogue promptly. Later, when we can work out an economical method of general distribution, we shall deliver catalogues free to oculists, optometrists and opticians. We believe, however, that the necessity and the value of such a reference book will be readily perceived by those who are chiefly interested, and that they will be willing to send us the necessary carrying charge to obtain one *immediately*.

We are reaching this man  
through our advertising

## Fits-U Eyeglasses



A mounting so inconspicuous, so comfortable and yet so secure, must be made of the finest material and in the most painstaking way in order to be serviceable. That is why you should be sure to get Fits-U Eyeglasses. Your optician can give you this mounting.

The genuine Fits-U has  
this mark on the bridge



Write for booklet  
"The Glass of Fashion"  
Address Dept.

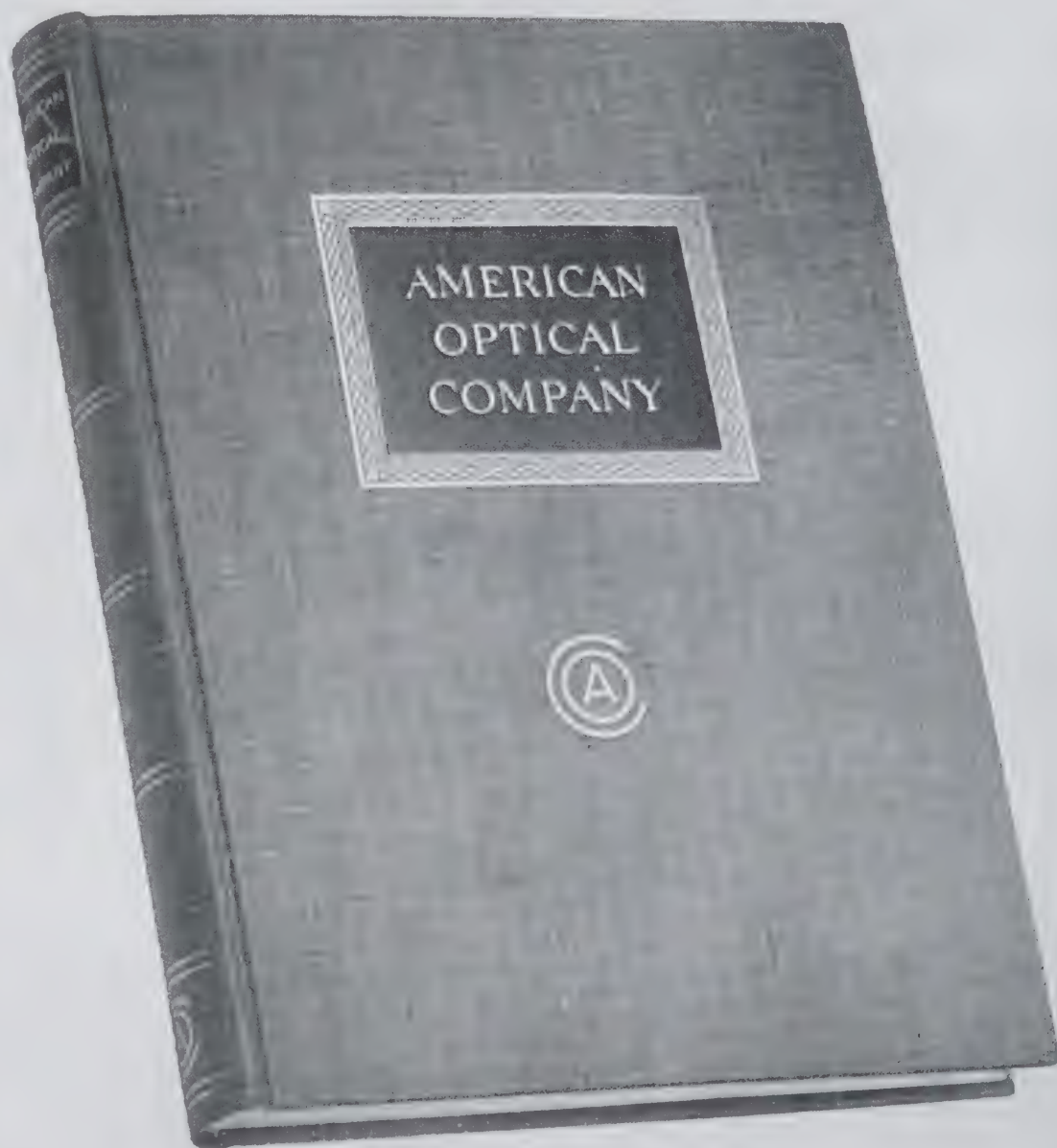
American Optical Company, Southbridge, Mass.  
Largest makers of spectacles, eyeglasses and lenses in the world



and telling him  
to go to YOU,  
his Optician, for Fits-U  
Eyeglasses

*This Advertising makes it  
easy for you to sell Fits-U's*





NOW READY

# Amoptico

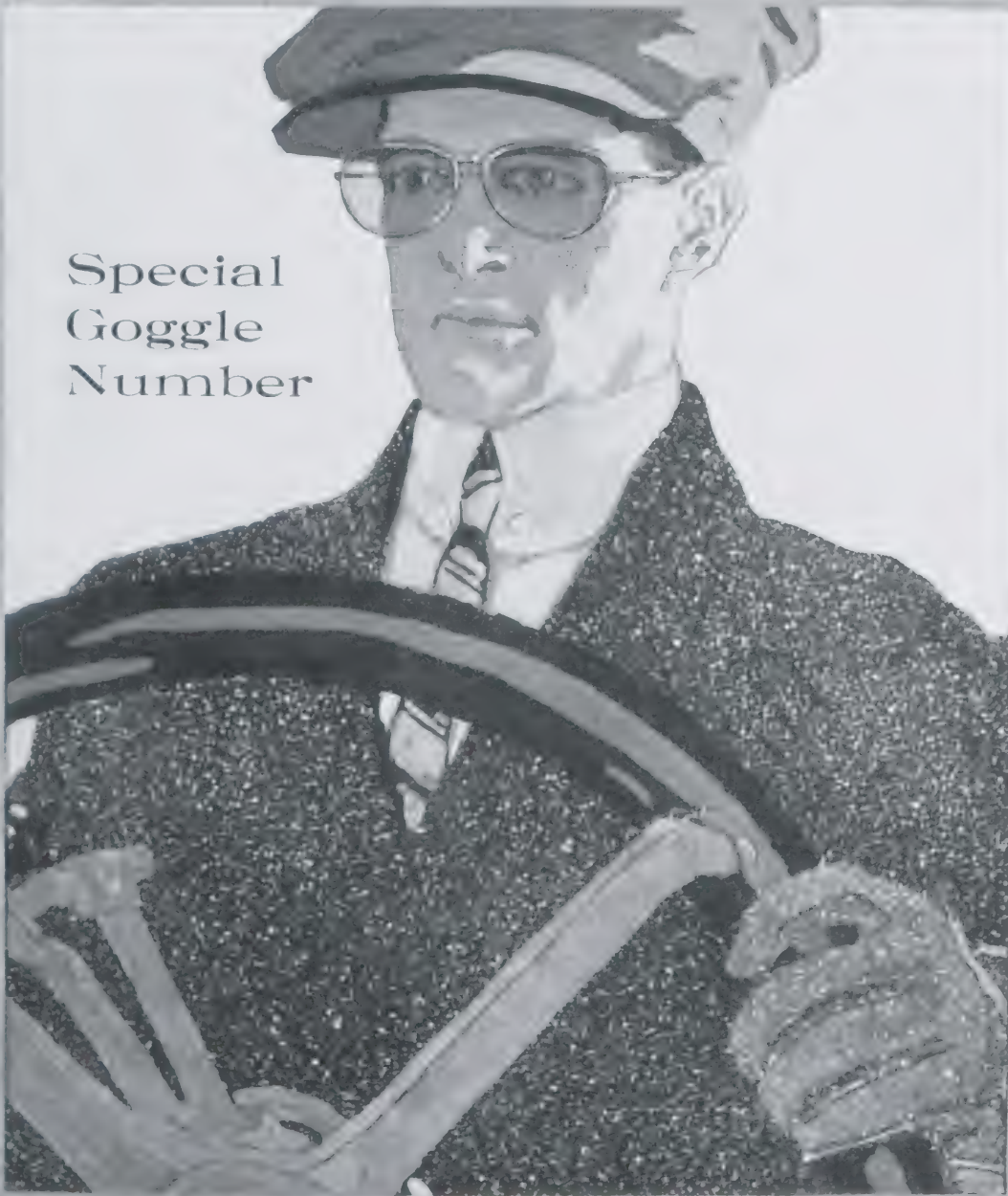
Published by the American Optical Company  
at Southbridge Massachusetts

Vol. 2

February, 1914

No. XI

Special  
Goggle  
Number







# For the Man Who *Cares*

Success in business, measured not simply in terms of money but of social well being, comes most surely to the dealer who sells the best goods at prices commensurate with their value. Ovalex Fits-U Eyeglasses are sold by the man who cares for *True* success—who wishes to be held in high esteem by the community in which he lives. They represent the highest attainment in eyeglass construction.

Before adopting the Ovalex style of spring we tested it 2,000,000 consecutive times to be sure that the principle on which its construction is based was right. Every bit of metal in the eyeglass is subjected to severe tests in order that it may meet our high standard. The workmanship is the product of highly trained experts. These are a few of the reasons for the uniformly satisfactory results our Ovalex Fits-U Eyeglasses give.

In carrying these goods in stock you will be sure you have the best that money, skill and long experience can produce. You will know that we help you sell them by the extensive national advertising campaign we are carrying on every day.

*If you are a man who cares, you can make use of this steadily growing demand for the Ovalex Fit-U Eyeglasses, and sell more and more of them to your material and social advantage. They mean bigger sales, more profits and satisfied customers.*

Order through your jobber at the following prices:



Per Dozen	OVALEX SPRING (Pat. Pending)		
	1-10 12K	Amoptico Line 1-10 14K G. F.	10K Gold
	Trade Price	Trade Price	Trade Price
Mountings Complete	\$7.50	\$9.00	\$16.50
Frames Complete	9.25	11.00	50.00
Fitting Sets Complete	8.00		16.50
Bridges Complete	1.00	4.50	9.00
Guards Complete	3.50	4.00	9.35
Guards Only	2.75	2.50	7.20
Arms Only	1.50	1.75	2.65
Rivets	.30	.30	.35
Washers	.20	.20	.35
Springs	1.00	1.25	1.85
Screws	.75	.75	1.50



# Amoptico



## The Possibilities of Your Business

A BLOCK of marble lay beside the road of a town in Italy many years ago. No one noticed it, except as it became an impediment in the path. Men walked around it; children scrambled over it, leaving the tracks of their muddy feet on its white surface.

The marble might be lying there to-day had not one man come upon it who was different from the others. He was an artist. Instead of stepping around the stone he stopped; for his trained eye had sensed a *possibility* in that marble that no one else had discovered at all.

He had the stone removed to his studio, and there, in the course of time Michael Angelo—for he was the artist who saw—produced that wonderful statue of David which has held the admiration of the world for centuries.

Every successful optometrist must be an artist—not with the genius that takes a shapeless stone and from it produces a work of art, but an artist in business—who sees below the surface of the happenings daily occurring in his work; who views the happenings in the light of *possibilities* out of which he may cut new thoughts which shall help to make his business the masterpiece of his life.

“The world is so full of a number of things”—and each of these things has a *possibility* hidden, waiting to be developed by the man with the brain to see and the hand to execute. In this month's AMOPTICO, which we have named a “Goggle” number, appear business *possibilities* on every page; but you who skim over their surface lightly, who read around the articles as though they were impediments in your path, will not find them. They are hidden away, only to be discovered by the man whose business eye is on the alert, watchful to seize them.

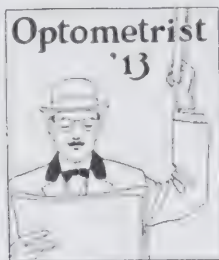
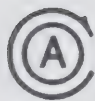
Read the article on Amoptiscopes following. There is a *possibility* outlined there, for a side line which you may turn to an actuality of increased sales. Have you the artist's eye to see it?

Think over the business-making possibilities of the auto goggles we are illustrating on other pages. Have you the trained mind to conceive and execute a successful selling plan for such a line in *your* town? Others are doing it. The *possibility* is there, but can you see it?

Michael Angelo did not produce his statue of David without the hardest kind of mental and physical exertion. A mere ordering of these goods from your jobber will not produce business success. When you have gone so far you have only brought the block of marble to your studio. The real task must begin when with all your possible tools mentally before you—selling plans, window displays, circulars, newspaper notices, etc.—you conceive the complete selling plan that shall *sell* your goods and put the profits into your pockets.



## Business Building Form Letters to Boost Your Sales



An optometrist in a fair sized town had for years been doing a medium sized business that brought him a decent living and kept him comfortably provided for. He didn't own an automobile, to be sure, but he conducted a progressive little optical trade that was easy and pleasant to run, so he felt well satisfied. Last

year, however, he took a business trip to a nearby city, where he had occasion to talk with his printer. It so happened that the printer was a man keeping well abreast of the newer developments along business efficiency lines, and the conversation swung to the possibilities of advertising the optometrist's business by mail. The points brought out were such that the optometrist returned home with a determination to try some of the methods explained by the printer. Instead of waiting for new business to come to him whenever it happened to want to, he went after new business with a series of appropriate form letters addressed to the people whose name appeared in his files.

What was the result? This fall the man has opened a branch store in a neighboring town, the business which formerly claimed his undivided attention has very largely increased, and the prospects are that it will not be long before the optometrist will need several assistants.

Form letters to customers are not a panacea for all business ills; far from it. But they are an agent which, when skillfully used, will do much to bring old customers more frequently to your place of business and help materially to enlarge your clientele.

We are printing on this page certain form letters that may help you to get a start in the right direction. The first of these, addressed to such customers as you may have fitted with Fits-U Eyeglasses recently, is given here:

LETTER TO CUSTOMER WHO BOUGHT  
FITS-U'S TWO WEEKS AGO

Dear .....:— Two weeks ago I had the pleasure of selling you a pair of Fits-U Eyeglasses, and while at that time I took special pains to see that they were fitted perfectly, it is possible that they may not yet be exactly adjusted to give you entire comfort. I should esteem it a favor if you would arrange to call on me again within a few days, so that we might examine them together once more and make any further slight changes which would seem to be called for. It is my desire to see that these Fits-U Eyeglasses give you complete satisfaction.

Yours very truly,  
(Signed) .....

Every optometrist knows that one prescription correcting eyesight defects will not last forever. But the ordinary man seldom realizes this fact. For that reason we give an outline of a form letter designed to be sent to customers whose eyes have not been corrected for some considerable time:

LETTER TO CUSTOMER WHO BOUGHT  
FITS-U'S A YEAR AGO

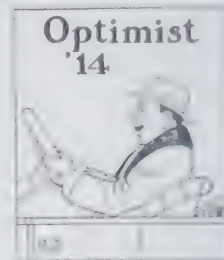
Dear .....:— Just a year ago I had the pleasure of fitting you with a pair of Fits-U Eyeglasses, which I hope have

proved satisfactory in every way. Accidents will happen, however, and it is quite possible that parts of the Eyeglasses may have become somewhat loosened or bent, so that slight adjustments would be beneficial. If you can make it convenient, it would be a pleasure to have you call, so that we might examine them together and make whatever repairs or adjustments are necessary.

Yours very truly,  
(Signed) .....

Perhaps you may have sold glasses to certain of your customers within a short time.

Try arranging a tasteful window display of your various case lines: leather, polished aluminum, etc., and write a letter to these customers similar to this:



Dear .....:— This week I am exhibiting in my window [or office, if you have no show window] a large variety of eyeglass and spectacle cases, and remembering that you recently purchased glasses here, I call your attention to this display, thinking it may prove of interest to you. It includes fine examples of the case-maker's art in a large variety of grades and styles: morocco, calf, polished aluminum, etc. Among these goods you will possibly find something which it would be convenient for you to own, and I hope that you will be able to come in and see them.

Yours very truly,  
(Signed) .....

It very frequently happens that one of your customers sends in a friend to have work of some nature attended to. In such cases it is well to have some letter ready which may be sent to your former customer, thanking him or her for having recommended you:

Dear .....:— It is a pleasure to say that your friend ..... has called on me to-day at your suggestion. I appreciate the fact that you have been so satisfied with the business relations we have had in the past as to recommend me to your friend, and shall look forward to serving you again at an early date.

Yours very truly,  
(Signed) .....

So we might go on, indefinitely. The field opened for such circular letters is practically without a limit. One good way in which to use these is to use a file divided according to months and weeks. When eyeglasses are sold on the first of January, possibly, a card showing this fact should be filed under date of January 15, when it will automatically appear as you run over your file for that day. After a suitable letter is written, the card may be filed under date of January 1st, of the following year, and another appropriate letter sent.

Probably every man can see innumerable ways in which his business might be improved, but owing to the old familiar fact that there are only twenty-four hours in each day, they simply have to be passed by. We give these letters with the idea to help out a little on the time question and "start the ball a-rolling." From time to time we shall endeavor to publish other business helps of a similar nature; and if you have had interesting business experiences of any sort, or have worked out some of the difficult problems that are constantly arising in a way that might benefit "the other fellow," write us about them. We wish to make this feature of AMOPTICO as valuable as possible.

## Speedwell Motor Glasses

We are illustrating here a new style of motor glass No. 3348 which is finding rapid favor wherever it is shown. Every little essential of comfort and use has been foreseen and provided for. Even the black enamel finish has been selected with an eye to service as well as to looks.

Although extremely simple, the bar construction shown is wonderfully strong and light, holding the lenses perfectly rigid under all ordinary strains. We have supplied a saddle bridge because for this type of eyeglass it seems to be ideal from every standpoint. The temples are Half Flat and Half Comfort Cables, soft and easy to wear, yet holding the glasses firm under all conditions.

Your customers who are fond of shooting or whose eyes are not strong enough to stand the white glare of reflected sunlight will be thoroughly pleased

with the shape of the extra large lenses. We have made them curved with plenty of room for eyelashes, and with the rims fitting so closely to the face that they will not interfere when the attention is suddenly drawn to one side.

Make a feature of them this spring. Display them tastefully and use your mailing list to circularize your customers. Every year there is a steadily growing demand for this kind of goods, and you should plan to secure your share of the business.

Here are the prices at which you can secure them from your jobber. There's a nice profit in each pair sold.

Cat. No.	Description	Per Dozen Trade Price
3348	Speedwell Motor Glasses with Amber Lenses in special Black Enamel Self-closing Case	\$12.25



## Another Fits-U Car Card You Need

Doesn't it give you a pleasant sensation to be able to sit back and say, "That's the best thing I've ever done!"

When the finished proofs of this new car card we are showing here arrived, we had the privilege of looking at them with just that satisfaction; the feeling of a good idea well executed bringing a satisfactory result.

If the Gold Dust Twins hadn't happened along in the street cars, or the Campbell Kids, or the Quaker Oats Man, or the "Little Fairy in Your Home," it is a three to one shot you might never have heard of the national brands they so ably help to sell. If the Fits-U car cards we are using now, and the newspaper and magazine ads, had never been used, your sales of Fits-U's would

have had a much smaller chance of jumping upward with leaps and bounds than they do now.

This latest addition to our array of street car cards is the best we have ever issued; dignified, artistic, and, best of all, with a real advertising kick behind it. If you are using the street cars in your own town you will be glad to ask for this sign. Just send us particulars regarding your contract with the Street Car Company, so that we may

have some data about the amount of advertising you contemplate doing and we will gladly co-operate with you. This kind of advertising has put Fits-U's on the map to stay. If you'll promise to use them, we will see that your name and address are imprinted in the space reserved for that purpose and sent to you free.



AMERICAN OPTICAL CO. NEW YORK



# Amoptico

## Goggle Cases for the Live Dealer



We are illustrating here the cases made to contain our regular goggle line. Each is an example of expert workmanship backed by a complete knowledge of those points which go to make the ideal case.

Cat. No.	Description	Cat. No.	Description
<i>Open end</i>	<i>To hold goggle number</i>	<i>Button end</i>	<i>To hold goggle number</i>
226 As illustrated	316 folding	268 As illustrated	3000
262 " "	3000	278 " "	3020
272 Style of 278 except open end	3026	381 " "	3052, 3053
		382 " "	3050, 3051
		383 " "	3060
<i>Tuck end</i>		385 Style of 381 large	3398
127 As Illustrated	211	386 Style of 381 extra large	3061
277 Style of 278 except tuck end	3026	387 As illustrated	3068, 3030
		388 Not illustrated	3005

You will find out the complete in every particular and asked to the most exacting requirements.



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Channing M. Wells President  
Albert B. Wells Treasurer  
J. Cheney Wells Vice-President and Secretary



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Southbridge, Massachusetts, U. S. A.

New York . . . 15 Maiden Lane  
Chicago . . . 122 S. Michigan Boulevard  
San Francisco . . . 140 Geary Street  
London . . . 39 Hatton Garden, E. C. 1

Cable Address: AMOPTICO, Boston  
Western Union Code used

Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material  
Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Tr.  
Frames and Accessories, Automobile Goggles, Lenses  
Spectacle, Eyeglass and Goggles  
Optical Machinery, Tools and Supplies, Etc.

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American Optical Company

Permission to reprint articles or illustrations may be obtained by writing  
to Editor of AMOPTICO, American Optical Company,  
Southbridge, Mass., U. S. A.

We wish to announce that all and any quotations or prices published in the present, or any previous issue of the "Amoptico," are valid only in the United States of America. Our foreign friends are requested to apply to their wholesale source of supply for quotations upon any lines illustrated or mentioned in the Amoptico.

We are taking the liberty of calling this to your special attention in order to avoid any misconception and possible disappointment, although it is apparent that on account of Customs charges, as well as higher freight rates and various other expenses, the selling prices of our manufacturers are slightly higher in foreign countries.

Nous prenons la liberté de vous faire connaître que tous les prix publiés dans l'Amoptico soit dans cet ou dans un numéro précédent ont validité seulement et exclusivement pour les maisons d'optique dans les États Unis d'Amérique.

Nous prions nos amis en étranger et d'outre-mer de bien vouloir s'adresser aux maisons de gros pour les prix de nos manufactures. Nous nous permettons d'attirer spécialement votre attention sur ce point, car il y a eu quelques malentendus, où on n'avait pas bien pris en considération les frais de douane et de transport etc., nécessitant évidemment des petites augmentations sur les prix indiqués dans l'Amoptico.

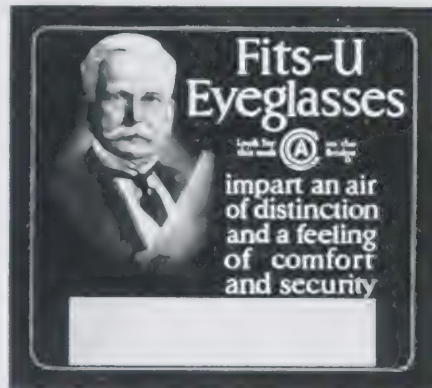
Wir beehren uns, besonders darauf aufmerksam zu machen, dass irgend welche Preise in der vorliegenden sowohl als allen fruheren Nummern des "Amoptico's" ausschliesslich fuer den Detailhandel innerhalb der Vereinigten Staaten von Amerika Gueltigkeit haben. Unsere ueberseeischen und auslaendischen Freunde bitten wir ergebenst sich wegen Preisen gefl. an den Grossehandel wenden zu wollen. Wir erlauben uns hierauf besonders hinzuweisen, da in der Vergangenheit in einzelnen Faellen Missverstaendnisse vorgekommen sind, indem die im Auslande erhobenen Zollsaeetze sowohl als die hoeheren Versandkosten und sonstigen Spesen nicht genuegend in Betracht gezogen worden sind.

Con el objecto de que nuestros amigos del exterior sepan que todos los precios cotizados en nuestra revista "Amoptico" son válidos para los Estados Unidos de América solamente, nos tomamos la libertad de llamar la atención sobre este particular.

Debido á los gastos de flete y acarreo, derechos de Aduana, etc., fácilmente se comprenderá que nuestros productos cuestan un poco más en el extranjero, y por lo tanto, rogamos á los interesados en cualquier artículo mencionado en nuestra revista, se sirvan solicitar precios de los comerciantes al por mayor.

## No. 10 of Our Slide Family Makes Its Bow

It is a very significant fact that when once an optometrist starts to advertise in moving picture shows, he very seldom stops. There's something about it that everyone seems to like, and our guess as to the reason is that it brings a steady increase in business.



AOCO Lantern Slide No. 10

Here is the newest baby in our Lantern Slide Family. Just like all the rest of them, it is a splendid example of what can be done in the matter of artistic slides. We know there will be a big rush for it from dealers already using this form of advertising, for every time we announce a new slide, the requests that immediately pour in almost swamp us. To those of you who are not now "Movie" advertisers, our suggestion is, investigate at once. Talk it over with the local theatre manager, and you may find that the movies are a good profitable proposition. At any rate it doesn't cost much to prove that point.

## Is Our General Catalogue on Your Desk Yet?



We wish you could read over our mail with us some of these winter mornings, just to see the continual stream of enthusiastic letters we receive from dealers to whom our General Catalogue has gone. One man after another and firm after firm tell us of what a help this "encyclopedia" of Optical goods is. We want every responsible person interested in our line to have one. Send us thirty-five cents to cover the cost of expressage and we will gladly forward one to your address.





No. 3026 1/2 White Metal.  
With coquille or Curved  
White or Smoke Lenses.  
Reversible temples.  
Price per dozen \$7.00.  
Gold Filled, per dozen,  
with curved amber  
lenses, \$12.00; Ficuzal  
lenses, \$13.00.

No. 3028 White metal.  
With coquille or curved  
White or Smoke Lenses.  
Price per dozen \$7.00.  
Gold Filled, per dozen,  
with curved amber  
lenses, \$12.00; Ficuzal  
lenses, \$13.00.



No. 3388 Aluminico, No.  
3688 Gold Filled. Ad-  
justable complete with  
bent Amber Lenses and  
half flat half Comfort  
Cable temples. Price  
per dozen for No. 3388  
(Alco.) \$13.50; for Gold  
Filled \$16.50.

No. 3398 Aluminico and  
No. 3698 Gold Filled,  
folding, complete with  
bent Amber Lenses and  
half flat half comfort  
cable temples. Price per  
dozen for No. 3398 (Al-  
co.) \$13.50; for Gold  
Filled \$16.50.



## Auto Goggles

**A**NY manufacturer in any line can stand up and shout in all his advertisements "We make the best goods and sell them at the cheapest prices." We are writing this advertisement for those who don't care especially about being shouted at in this universal fashion. Instead we wish to announce to you quietly that we have a very extensive department where we manufacture goggles to meet every requirement. Owing to the enormous size of our business we are in a better position to feel the pulse of the nation and learn its de-





No. 3368 Aluminum and No. 3668 Gold Filled, complete with curved Amber Lenses. Price per dozen for No. 3368 (Alco.) \$9.75; for Gold Filled \$14.75.

No. 3026 White metal. With coquille or curved White or Smoke Lenses. Price per dozen, \$7.00. Gold Filled, per dozen with curved amber lenses, \$12.00; Fieuzal lenses, \$13.00.



No. 3378 Aluminum and No. 3678 Gold Filled, complete with curved Amber Lenses. Price per dozen for No. 3378 (Alco.) \$9.75; for Gold Filled \$14.75.

3378

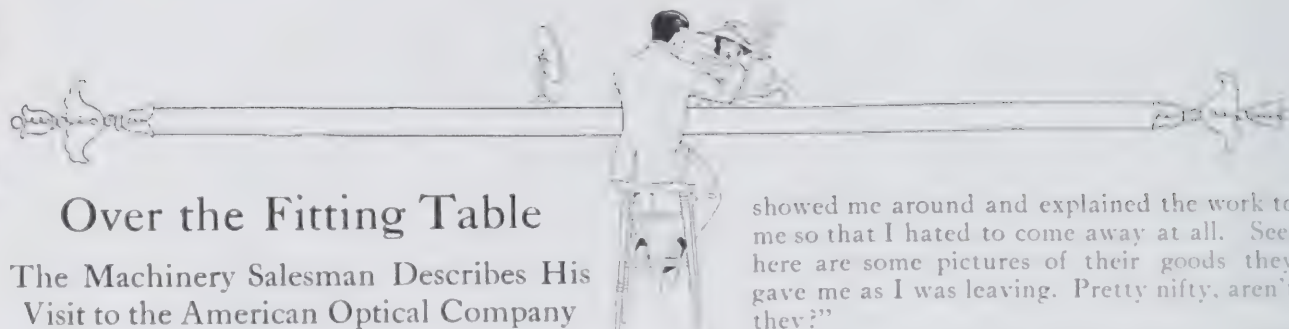
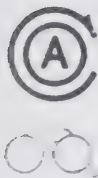
mands, than any other optical company. This is nothing especially to our credit—it is simply one inevitable result of being the Largest Manufacturers of Optical goods in the World.

If you carry our goggles, you will find what we say is true. The variety of our goods, their up-to-date models, their perfect construction, will give you talking points that will insure a sale whenever there is the remotest possibility of making one. We are splendidly equipped to supply these goggles fitted with any of the popular colors and shades in flat or curved lenses. We use only selected glass for this work and our goggle lenses are notably clear and perfect.

Remember then, when you send your next order to the jobber, that those made by the American Optical Company are the result of a world-wide knowledge of goggle requirements. One of our styles is particularly adapted to your own territory and customers. Probably it is illustrated right in this number of AMOPTICO. Just pick it out and send in your order to the jobber. Tell him, too, that you want one of the AOC goggle Window Display signs just to help push your sales, and he'll be glad enough to see that you get one.







## Over the Fitting Table

### The Machinery Salesman Describes His Visit to the American Optical Company

"Back again," greeted the Machinery Salesman with a cheery laugh and carefree swing of his shoulders, "and, say, believe me, Mr. Meniscus, I've had some trip. All out and around and back again through the best little country in the world, and the glad hand from almost every one of my customers. Yes, sir, it's been a great trip, and the holiday trade has sure kept me jumping."

"Fine," said the Optometrist\* reaching out and removing two of the three cigars which seemed to be too temptingly near the salesman. "Glad to hear it! I've had some business myself. Made a good window display of some cards I got from the American Optical Company, and it took like a vaccination. Have hardly had time yet to straighten out my accounts and see how much I sold. Did you work pretty steadily this trip, or get a chance to look around a bit as you were planning? I know you said you would try to take an afternoon or so off, if you could."

"Believe me, I did," responded the Machinery expert, sinking back in his chair, and touching one of the Optometrist's matches to the one cigar that had not been removed from temptation's way. "And that is one of the things that bring me here. You see I went through eastern Massachusetts last week, and it so happened that I landed with quite a jolt in Southbridge. I guess you know the place all right. It is where most of your goods come from so you ought to."

"Sure, I know. The American Optical Company is there," said the Optometrist.



"Right!" continued the salesman, "And I was there too, the two biggest things in town, if I do say it myself. In fact I went around to call, and you may lay to what I tell you, friend Meniscus, when I say in vulgar parlance, that they have 'some plant.' I went in there a total stranger, and they received me like a long lost brother,

showed me around and explained the work to me so that I hated to come away at all. See, here are some pictures of their goods they gave me as I was leaving. Pretty nifty, aren't they?"

"A-Ha! Some chains and reels I see. Glad you've got these. My stock's getting low. I've got to order more."

"Let me tell you, Mr. Meniscus, you'll make no mistake if you stock these. I saw the way they



make them, and I *know*. Look at the different styles of reels they carry. That "B" one strikes me pretty well. What do you think of it? It's just about fancy enough to have a bit of snap and yet it's plain enough to be in perfect good taste."

"It is rather nice," said the Optometrist examining the photograph closely. "Guess the photo is retouched though. Profile. That finish looks a bit unnatural to me."

"Not a bit of it, my boy! That's just the way they make them. I never saw so much care taken before to keep everything in top notch shape. When they've got started on the finishing work each reel is kept in a separate little cardboard compartment so that nothing can scar it in any way."

"That's all right. Glad to know it, but I'm not buying cardboard boxes, I'm buying reels, and the main point is to have 'em work. What about that part of it?"

"Wish I had one in my pocket to show you, my friend. They explained the whole thing to me, but I'm no Optometrist, so I lost the track slightly. I do know, however, that they are using a new pawl construction, that gives a perfectly smooth action, and I know it was described in the October AMOPTICO they issued."

"I remember, now you speak of it," grunted the Optometrist. "Sounds good and looks good. The Company has used me squarely on other stuff I've bought, and if they are willing to stake their reputation and put their name on these reels, I

\*Foot note: We are pleased to announce that our friend the Optician has recently passed the State Board examination, and henceforth will assume the title "Optometrist."

guess I'll write to my jobber and specify them. What did you find out about the chains?"

"I found this much," said the salesman tilting back in his chair till he threatened to send a tray of lenses to the floor, "they've got a system in making them that can't be beat. Everything, from the cheaper metals to the solid gold goods goes through, and they watch 'em like hawks."

"Sounds good," said the Optometrist, "how does it work out?"

"They inspect every link of the chain, and spend all sorts of time getting the right finish. Wish I had thought to get one while I was there."

"Did you learn anything else about them?" inquired the Optometrist interestedly.

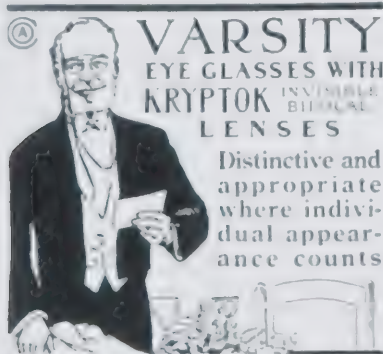
"Oh, yes. I learned that they make their own wire for eyeglass chains, and in fact make their own chains, too. So they're in a position to be sure of the exact quality of material and workmanship put into them. Come, you'll make no error if you specify Amoptico make when you send the jobber your next order for chains."

"I'm glad you went up to see them, my friend," said Mr. Menckens. "I'll specify them right here after."

"You'll make no mistake," repeated the Machinery Salesman as he reached for his coat and the two cigars which the Optometrist had moved out of his way earlier in the afternoon, "and when you go near Southbridge, just make it a point to visit their factories. It's the greatest thing I ever saw, and I've seen a few in my time, too."

"Leave it to me," said the Optometrist as the worthy Machinery Salesman lit his cigar and waved a final farewell.

## Run This in Your Local Newspaper



Electrotype No. 24

Newspaper advertising is now the rule rather than the exception in the optical business, and when properly used it can be made a big factor in the development of your establishment.

Here is one of the latest newspaper electros which we shall be glad to send you free of charge if you are, or contemplate, advertising.

Write to-day for it and tell us something of your advertising plans.



## A Leader for Your Amoptiscope Line

The latest adjunct to our already extensive line of Amoptiscopes is announced herewith and is shown in the illustration. We call it Ivory Zyloware. It is made of a new material, especially adapted for this purpose, being a beautiful cream white color, pleasing in appearance, and light and convenient to handle, the lenses being inserted by our own special process.

The lenses regularly furnished are 63mm. in diameter, with a focal value of +8. The handle is 5" long.

Cat. No.	Style	Diam.	Focus	Per Dia.	Trade Price
R 5953	Ivory Zyloware	76 mm. (3 in.)	+6.50		\$22.00

Order them to-day from your jobber; you will find a ready sale for them.



## Cut Prices

## The Bluebeard of Honest Business

Every manufacturer and dealer who has his own welfare and the welfare of the optical business at heart recognizes the menace of Cut Prices.

All permanent business is based on Public Confidence. Nothing which lacks such confidence can long endure successfully.

There is no surer way of undermining this very vital need of business than by cutting prices. The Public—that abstract word used to designate a body of thinking individuals, each with common sense such as you, the reader, possess, realizes that every manufacturer of honest goods is entitled to a decent profit on what he makes—a reward for his labor. It is known that it costs a definite amount, in labor and money, to make those goods, consequently, that they should have fairly definite selling prices.

What does it mean if the optical goods sold to these men and women do *not* have these definite prices?

It means that something is *wrong*! Cut prices mean cheap goods. The legitimate dealer has to ask

help from the manufacturer to meet this unfair competition, and the manufacturer in turn has to cheapen his product in order to make his own legitimate profit. A

vicious circle is completed, constantly tending toward lower prices and lower quality goods.

Cut Prices mean the Ruin of the legitimate Optometrist's business.

Therefore, we say:

*Maintain your prices.* It will give the public confidence in you and your goods.

*Maintain your prices.* Your jobber can then ask a fair price for his goods and give you prompt, satisfactory service.

*Maintain your prices.* The jobber can then afford to pay a fair price for the manufacturer's goods, so the manufacturer can keep up his standard and produce real quality goods.

Let everyone who is truly interested in handling optical goods and building up a reputation for reliability and square dealing, stand together to destroy the cut price Bluebeard of Honest Business.

## An Early Use of Goggles in Machine Shops

In the magazine entitled "New England Telephone Topics" for November, 1913, appears a very interesting report of a speech made by Thomas A. Watson, who was associated with Alexander Graham Bell in the earliest days of the development of the telephone. Speaking of his early experiences, he gives a little account of the time he spent in a Boston electrical shop—

"I was first set to work on a hand lathe turning binding posts for \$5 a week. The mechanics of to-day, with their automatic screw machines, hardly know what it is to turn rough castings with a hand tool. How the hot chips used to fly into our eyes! One day I had a fine idea. I bought a pair of twenty-five cent goggles, thinking the others would hail me as a benefactor of mankind and adopt my plan. But they laughed at me for being such a 'sissy boy' and public opinion forced me back to the old time-honored plan of winking when I saw a chip coming. It was not an

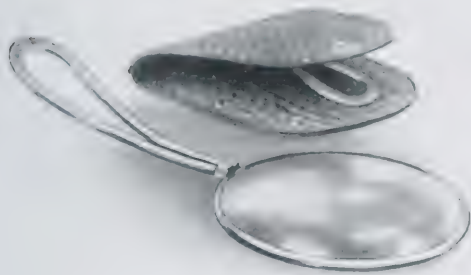


efficient plan, for the chip usually got there first. There was a liberal education in it for me in manual dexterity."

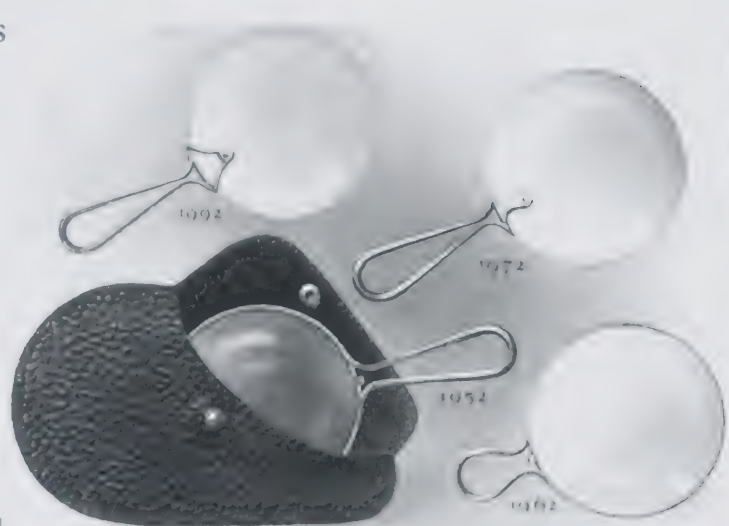
What a change there has been in the attitude adopted by shop workers since that time. With the various insurance companies becoming more and more strict in their demands for safety devices; with state laws on the subject becoming more and more inclusive; with labor unions insisting that

safety devices be installed wherever possible; a country-wide demand for goggles suitable for shop work has grown up. It is well to keep a supply of these on hand and advertise them, especially if you do business in a town where there are large industries using many machines. An investigation of the use of goggles in manufacturing plants should prove profitable to anyone.

## "This Week John Smith Has in His Window—" Amoptiscopes



Number 2052



Here is a little suggestion for a side line which may help to "Boost"—a selling campaign for Amoptiscopes.

This line of goods differs materially from some others manufactured by us, in that its use is not restricted to any one class of people.

The decorations of your windows are one of the most valuable forms of advertising you can have. Arrange a tasteful display of Amoptiscopes, with simple signs dwelling on the variety of uses to which these useful articles may be put, bringing out on each some specific point in its favor.

Try mounting several near the front of your window (be sure they do not focus on any inflammable material) placing behind each something that will arouse curiosity; a silver dollar, some interesting bit of nature, a square of silk to attract the ladies, or a bit of printing. The possibilities are infinite.

By circularizing your list of customers with a lively letter calling attention to your window display and pointing out clearly how handy Amoptiscopes are, further interest may be aroused.

There has been a steadily-growing demand for these Amoptiscopes recently, and with a bit of planning and work you should be able to "cash in" on it. Your jobber carries them at the following prices which you will find very reasonable, allowing you to sell with good profit at prices that will give them a ready sale.

### WITH RIMS

Diameter	Focus	Alumino		Gold Filled	
		Cat. No.	Per Doz.	Cat. No.	Per Doz.
51mm. 2 in.	+10.00	1952	\$4.60	1952	\$7.75
		1962		1962	
51mm. 2 in.	+13.00	1952	4.95	1952	7.00
		1962		1962	
63mm. 2 1/2 in.	+8.00	1952	5.30	1952	8.00
		1962		1962	
76mm. 3 in.	+6.50	1953	6.00	1953	8.45
		1963		1963	

### RIMLESS

Diameter	Focus	Alumino		Gold Filled	
		Cat. No.	Per Doz.	Cat. No.	Per Doz.
51mm. 2 in.	+10.00	1972	6.25	1972	8.50
		1982		1982	
51mm. 2 in.	+13.00	1972	6.60	1972	9.25
		1982		1982	
63mm. 2 1/2 in.	+8.00	1972	7.00	1972	9.00
		1982		1982	
76mm. 3 in.	+6.50	1973	7.60	1973	10.00
		1983		1983	

### FOLDING

Diameter	Focus	Alumino		Gold Filled	
		Cat. No.	Per Doz.	Cat. No.	Per Doz.
51mm. 2 in.	+10.00	2952	\$5.75	1952	\$8.50

In ordering, state quantity, catalogue number and focus desired. Prices above include unlined flexible leather cases with button flap.

## Change in AOCo Numbering System for Patented Short Bridge Fingertiece Eyeglasses

In order to make the work of ordering AOCo products as light as possible we have recently adopted a new system of numbering Short Bridge Eyeglasses which we feel sure will find favor. Instead of the system which has been in vogue for some time, our new plan consists simply in placing an O before the number denoting style or size of the regular bridge, to indicate the patented short bridge, as O3112, O412, etc. This O does not, however, have any relation to "Ovalex," our special spring.

Remember this when ordering from your jobber. If you want a Short Bridge, use an O before the other figures.



## A New Zyloware Fingerpiece Mounting

We have extended the line of Zyloware goods until now we include the Fits-U fingerpiece eyeglasses with the entire front made of Zyloware. That these will prove popular we have little doubt, as they are light, comfortable, and at the same time handsome and distinctive in appearance. While we are talking



of Zyloware, we want to thank all of our many friends for the ready response they made to our announcement in the October issue of these new goods. So large have been our orders, that, notwithstanding our extensive preparations, we were nearly swamped in the rush. Beyond question, the day of Zyloware is on, and from present indications it promises to be a very long time before the demand will even hesitate. We believe that little effort on your part is needed to further the good work of pushing sales of Zyloware, which carry a good profit to your cash drawer. The new fingerpiece mountings can be supplied with any of the regular style guards, and should prove very attractive. Price for styles illustrated:

Cat. No.	Description	Color	Trade Price Per Dozen
R3112	"Fits-U" Zylo Frames with 1/10 12K G. F. Guards, Spring and Arms	Dark Shell	\$15.00
R3112	"Fits-U" Zylo Frames with 10K Gold Guards, Springs and Arms	Dark Shell	26.00

## No. 893 10K Gold Oval Reduced Springs

"Every little bit helps," as the old saying goes—and every little bit of excellence we can add to the smallest piece of material that goes to make up a pair of eyeglasses is being added. (We might append in parenthesis, though, that it is hard to find places where we can begin to improve—they're so excellent as they are.)

The spring of an eyeglass is a small affair, but like the governor on an engine, it's mighty essential. Our No. 893, 10K Gold Oval Reduced Springs are being produced by a new process, which gives them greater resiliency than ever. We will supply this improvement in all gold springs, including those furnished on complete eyeglass frames and mountings.

## AOC Co Trade-marks Your Protection

For over eighty years the American Optical Company has been manufacturing optical supplies, and it has been our policy to see that wherever possible a trade-mark or trade-name was placed on our goods, in order that they might be identified with our Company.

Of course everyone is familiar with such names as "Fits-U," "Ovalex" and many other American Optical Company trade-marks, but there are some not quite so generally used which are apt to escape you unless special efforts are made to see that they do not.

Realizing this fact we have prepared a trade-mark circular for distribution among the dealers handling AOC Co goods, and we believe that it will be to the advantage of everyone to possess one of these for reference. When you write your next letter about advertising simply add a postscript saying, "Please send me your Trade-mark Circular," and we will requisition Uncle Sam to see that it is done at once.

## A Sales Pusher for Cases

Display is half the battle when it comes to selling certain lines of goods, and especially cases. They may be ever so attractive, but unless seen under the most favorable circumstances, it is often impossible to make a sale. The green silk velvet display pad we illustrate here is made with a strong



velvet covered cardboard back, with a special arrangement of elastic snaps to hold the cases in place. The use of these will add a touch of individuality to your display and create a setting that will materially help out your selling problem.

Price of pad without cases, \$1.75  
Complete with cases as follows:

328 PA	328 PA2
328 PA1	328 PA3
328 PA1 oxidized	328 PA3 oxidized
Price, \$3.75	

# *The American Automatic Rimless Edging Machine*

No. M 72



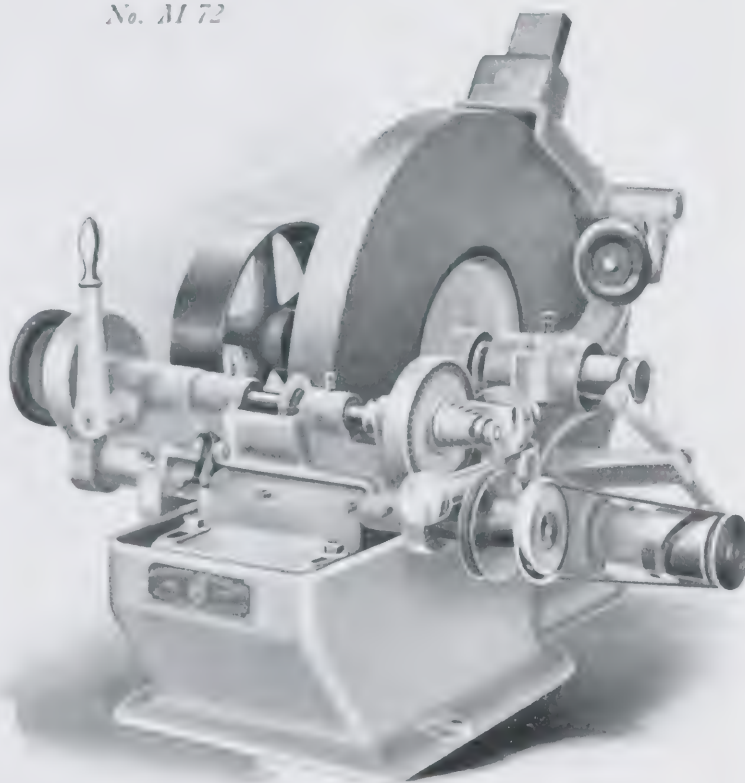
A **DISTINCTIVE** machine made with all the expert skill possessed by a corps of engineers and machinists, worked out in every detail with a complete understanding of optical trade requirements. Every adjustment is exact; every gear true; every bearing perfect.

Price

**\$135, Net**

F. O. B. Southbridge,  
Mass., U. S. A.

Crating for export shipment  
\$2.50 extra



*More Automatic Features than any  
Edging Machine Ever Before Marketed*

**Formers.** Every size and shape of regular oval and circle is provided by a simple micrometer adjustment.

**Honing.** Face of stone kept perfect by automatic honing device.

**Gears** covered to exclude grit, greatly adding to the life of the machine.

**Stone** is all above bench surface. Bench need only be cut for belts and drain pipe.

**Clutch** is hand operated, starting or stopping mechanism instantly when necessary.

**Tension** against stone is uniform throughout the grinding of entire periphery of lens.

This is *not* true of machines where lens is held against stone by spring tension.

*We have built edging machines for many years, and know them thoroughly. Hundreds are running daily in our own factory. "The American" represents our idea of the ideal Rx shop machine for accurate, every-day work and long, faithful service.*





# Some Facts About Onepiece Bifocals

"UNI-BIFO" (LUXE)  
Registered European Trade-mark

Patented June 22, 1909. Aug. 31, 1909. Jan. 18, 1910. April 12, 1910. Other patents pending.

This new lens is a most wonderful achievement in ophthalmic lens grinding, in which we have successfully accomplished a result long sought and seemingly impossible; the production of two wholly distinct spherical curves upon one surface, whose edges join without mark or aberration. This was possible only after years of experimental work in developing precision machinery of the very highest order. The beauty and perfection of Onepiece Bifocals is admitted by all who have seen them.

## These Points Will Answer Many Questions

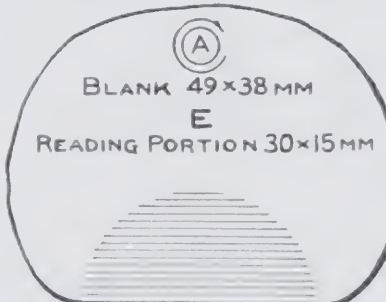
**Onepiece Bifocals** are made in toric form only, index 1.52, as blanks finished on the concave or bifocal side, as finished lenses. In uncut form blanks and lenses are regularly:

B -Round. 47 mm. with 19 mm. reading portion.

E -Oval. 49x38 mm. with 30 x 15 mm. reading portion.

The manufacturing, finishing and selling of **Onepiece Bifocals** is protected by United States and foreign letters patent. Finishing licenses entitling the holder to purchase blanks from the manufacturer and to finish and sell them are offered by the owners of the controlling patents. Further information will be gladly furnished upon request.

Onepiece Bifocals may now be obtained from any concerns holding finishing licenses.



**Onepiece Bifocal** blanks are regularly carried in stock by us in all surface curves for combinations usually required in distance powers of:

+12 to +3.00 with reading addition +.50 to +3.50.

-.25 to -3.00 with reading addition +1.00 to +3.50.

Special combinations can be made on order.

A complete system of blank numbers has been adopted, making it easy to dispense with the use of a chart, if desired. Charts with full directions for selecting blanks and surfacing will be sent upon request.

A stock of approximately eighty-five pairs of blanks is sufficient for the regular run of prescription requirements.

PRICES PER PAIR Single lenses one half price of pairs		TRADE PRICES Discount 6 per cent. Cash 30 days				Minimum Retail Prices (Net)
		BLANKS	LENSES Finished both sides Spherical, Cylindrical or Sphero-Cylindrical			
			Bifocal Side Finished	Uncut	Edged	
REGULAR SIZES						
White		\$7.50	\$8.50	\$9.00	\$9.25	\$15.00
Colored (Standard Shades)		9.50	10.50	11.00	11.25	17.00
Combined with prism, White			10.00	10.50	10.75	16.50
Combined with prism, Colored (Standard Shades)			12.00	12.50	12.75	18.50
Combinations not on chart		15.00	16.00	16.50	16.75	22.50
SIZES LARGER THAN REGULAR						
White		15.00	16.00	16.50	16.75	22.50
Colored (Standard Shades)		17.00	18.00	18.50	18.75	24.50
Combined with prism, White			17.50	18.00	18.25	24.00
Combined with prism, Colored (Standard Shades)			19.50	20.00	20.25	26.00



# American Optical Company

By Invitation Member of

Rice Leaders of the World Association



# American Optical Company



As previously announced, the American Optical Company, because of the sterling quality of its product, its long established business, the principles of honor and high integrity on which its business is conducted, and the unquestioned financial standing it enjoys, has been honored by a membership through invitation in the Rice Leaders of the World Association.

## **Distinction Accorded AOC Co Goods**

This organization is composed of a strictly limited number of concerns, each firm a recognized leader in its own line of endeavor. How this standard of excellence and the strict qualifications for membership have been maintained is evidenced by the standing of the companies which are accepted members in this Leaders of the World Association. The American Optical Company was chosen after an investigation of its activities and connections. While AOC Co goods have always been considered a standard of excellence, this added distinction now stamps them as Leaders of the World.

## **Your Local Prestige Increased by Being Identified with the Leaders of the World**

The purpose of this banding together of such leading companies is to add to the individual prestige of each member, and by means of an unusually comprehensive campaign of publicity to educate the public to recognize the qualities which made it possible for each member to join the Association. This concerted action must lead to one result—a wider knowledge of these concerns and a greater demand for their products, which means new customers and increased sales for you who handle AOC Co goods.

**An Unprecedented Window Display Contest in Which  
You are Urged to Take Part**

A Window Display Contest offering four hundred and sixty-three cash prizes, amounting to \$10,000, will be held, and dealers in each line of business conducted by the members of the Rice Leaders of the World Association will be eligible to compete for these prizes. This means that every dealer in AOCo goods will have a fair and equal chance to win. Your efforts will stamp you in the estimation of your city or town as a "Leader of the World" dealer, handling the product of a member of the Leaders of the World Association. *You* are thereby linked to this enormous national campaign to increase your own business standing and prestige. Your display windows will become a magnet for your customers and the public at large. Many in your own locality—your customers—even prospective customers, and your friends, will compete in this great contest and be interested in your window display.

**\$25,000 Idea Letter Contest for your Customers**

To still further increase public attention, an "Idea Letter Contest", with cash prizes aggregating \$25,000, will shortly be announced, this large sum to be distributed in a competition designed to procure letters from the public on the superior merits of the members' products with ideas on their distribution and use.

**World-wide Advertising Campaign in the Leading Magazines**

Beginning with the next issue of some of the leading magazines and supplementing the general publicity campaign, will appear double-page advertising displays telling of this wonderful organization. These advertisements will be found in the following national magazines:

LIFE	(Issued Feb. 25th.) One page in color, including emblem
EVERYBODY'S	March (Issued February 20th)
MUNSEY'S	March (Issued February 25th)
GOOD HOUSEKEEPING	March (Issued February 25th)
HARPER'S MONTHLY	March (Issued February 25th)
COSMOPOLITAN	APRIL (Issued March 10th)

These universal and distinctive advertisements are bound to attract attention and interest. They plainly outline the objects of the Association, affording added prestige and national publicity for the members as well as establishing the Association emblem in the public mind.



Further particulars pertaining to contests—including a great Salesmen's Contest—will be announced later. Meanwhile, watch for the big double-page displays of the Rice Leaders of the World Association, and resolve that by handling American Optical Company goods you will link yourself with this campaign and profit accordingly.

### Members Rice Leaders of the World Association

Spectacles, Eyeglasses, Lenses, "Fits-U"  
and other Optical Goods  
AMERICAN OPTICAL COMPANY  
SOUTHBRIDGE, MASS.

Rifles, Shotguns and Ammunition  
WINCHESTER REPEATING ARMS CO.  
NEW HAVEN, CONNECTICUT

Locks, Builders' Hardware & Chain Hoists  
THE YALE & TOWNE MFG. CO.  
NEW YORK

Cranes' Paper and Fine Stationery  
EATON, CRANE & PIKE COMPANY  
PITTSFIELD, MASS.

"Y & E" Filing Devices & Office Systems  
YAWMAN & ERBE MFG. COMPANY  
ROCHESTER, N. Y.

Hams, Bacons, Lard, Veribest Specialties,  
Grape Juice  
ARMOUR & COMPANY  
Bouillon Cubes, Laundry and Fine  
Toilet Soaps

FLOUR  
PILLSBURY FLOUR MILLS CO.  
MINNEAPOLIS, MINN.

Towle's Log Cabin Syrup  
THE TOWLE MAPLE PRODUCTS CO.  
ST. PAUL, MINN.

Fine Furniture  
BERKEY & GAY FURNITURE CO.  
GRAND RAPIDS, MICH.

"Niagara Maid" Silk Gloves and Ladies'  
Silk Underwear  
NIAGARA SILK MILLS  
NORTH TONAWANDA, N. Y.

Rugs and Carpets  
M. J. WHITTALL  
WORCESTER, MASS.

Typewriters  
REMINGTON TYPEWRITER CO.  
NEW YORK

"Porosknit" Summer Underwear  
CHALMERS KNITTING COMPANY  
AMSTERDAM, N. Y.

Small Motor and Fan Specialists  
THE ROBBINS & MEYERS COMPANY  
SPRINGFIELD, OHIO

Elgin Watches  
ELGIN NATIONAL WATCH CO.  
CHICAGO, ILL.

Umbrellas  
HULL BROTHERS UMBRELLA CO.  
TOLEDO, OHIO

Bohn Syphon Refrigerators  
WHITE ENAMEL REFRIGERATOR CO.  
ST. PAUL, MINN.

Alabastine Sanitary Wall Coating  
ALABASTINE COMPANY  
GRAND RAPIDS, MICH.

Fruit Jars, Packers' & Druggists' Glassware  
HAZEL-ATLAS GLASS COMPANY  
WHEELING, W. VA.

"Oildag", "Gredag", Acheson-Graphite  
and Electrodes  
INT'NAT'L ACHESON GRAPHITE CO.  
NIAGARA FALLS, N. Y.

Electric Pleasure and Commercial Autos  
"Detroit Electric"  
ANDERSON ELECTRIC CAR CO.  
DETROIT, MICH.

Sharpening Stones and Abrasive Materials  
THE CARBORUNDUM COMPANY  
NIAGARA FALLS, N. Y.

Revolvers  
SMITH & WESSON  
SPRINGFIELD, MASS.

Lawn Mowers  
COLDWELL LAWN MOWER CO.  
NEWBURGH, N. Y.

Waterman's Ideal Fountain Pens and Ink  
L. E. WATERMAN COMPANY  
NEW YORK

Holeproof Hosiery  
HOLEPROOF HOSIERY COMPANY  
MILWAUKEE, WIS.

Clocks, "Junior Tattoo Alarms"  
THE NEW HAVEN CLOCK CO.  
NEW HAVEN, CONNECTICUT

"Indestructo" Trunks and Luggage  
NATIONAL VENEER PRODUCTS CO.  
MISHAWAKA, IND.

Electric Heating Apparatus  
SIMPLEX ELECTRIC HEATING CO.  
CAMBRIDGE, MASS.

Women's Fine Shoes "Queen Quality"  
THOMAS G. PLANT COMPANY  
BOSTON, MASS.

# American Optical Company, Southbridge, Mass., U.S.A.

## ONEPIECE BIFOCAL CHART

+ 6.00 BASE  TORIC BLANKS

DISTANCE POWER	CURVE DISC SIDE	READING ADDITION													
		.50	.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	
Plano	-6.00	1014	1016	1018	1020	1022	1024	1026	1028	1030	1032	1034	1036	1038	
+12	-5.87	1114	1116	1118	1120	1122	1124	1126	1128	1130					
+25	-5.75	1214	1216	1218	1220	1222	1224	1226	1228	1230	1232	1234	1236	1238	
+37	-5.62	1314	1316	1318	1320	1322	1324	1326	1328	1330					
+50	-5.50	1414	1416	1418	1420	1422	1424	1426	1428	1430	1432	1434	1436	1438	
+62	-5.37		1516	1518	1520	1522	1524	1526	1528	1530					
+75	-5.25		1616	1618	1620	1622	1624	1626	1628	1630	1632	1634	1636	1638	
+1.00	-5.00			1818	1820	1822	1824	1826	1828	1830	1832	1834	1836	1838	
+1.25	-4.75			2018	2020	2022	2024	2026	2028	2030	2032	2034	2036	2038	
+1.50	-4.50			2218	2220	2222	2224	2226	2228	2230	2232	2234	2236	2238	
+1.75	-4.25			2418	2420	2422	2424	2426	2428	2430	2432	2434	2436	2438	
+2.00	-4.00			2618	2620	2622	2624	2626	2628	2630	2632	2634	2636	2638	
+2.25	-3.75			2818	2820	2822	2824	2826	2828	2830	2832	2834	2836	2838	
+2.50	-3.50			3018	3020	3022	3024	3026	3028	3030	3032	3034	3036	3038	
+2.75	-3.25			3218	3220	3222	3224	3226	3228	3230	3232	3234	3236	3238	
+3.00	-3.00			3418	3420	3422	3424	3426	3428	3430	3432	3434	3436	3438	
-25	-6.25			11218	11220	11222	11224	11226	11228	11230					
-50	-6.50			11418	11420	11422	11424	11426	11428	11430	11432	11434			
-75	-6.75			11618	11620	11622	11624	11626	11628	11630	11632	11634			
-1.00	-7.00			11818	11820	11822	11824	11826	11828	11830	11832	11834			
-1.25	-7.25			12018	12020	12022	12024	12026	12028	12030	12032	12034			
-1.50	-7.50			12218	12220	12222	12224	12226	12228	12230	12232	12234	12236	12238	
-1.75	-7.75			12418	12420	12422	12424	12426	12428	12430	12432	12434	12436	12438	
-2.00	-8.00			12618	12620	12622	12624	12626	12628	12630	12632	12634	12636	12638	
-2.25	-8.25			12818	12820	12822	12824	12826	12828	12830	12832	12834	12836	12838	
-2.50	-8.50			13018	13020	13022	13024	13026	13028	13030	13032	13034	13036	13038	
-2.75	-8.75			13218	13220	13222	13224	13226	13228	13230	13232	13234	13236	13238	
-3.00	-9.00			13418	13420	13422	13424	13426	13428	13430	13432	13434	13436	13438	



# HOW TO ORDER ONEPIECE PATENTED BIFOCAL OPHTHALMIC LENS BLANKS

REGISTERED EUROPEAN TRADE MARK "UNI-BIFO (LUXE)"



**All genuine Onepiece Bifocal Blanks are made in toric form and finished on the bifocal or concave side.**  
Cylinder, if specified, must be ground convex. If concave cylinder is specified, transpose to convex.

**To Select Blank from Chart:** Find distance spherical power wanted in column marked "Distance Power." Follow this line across the chart to column giving the reading addition wanted. Blank number will be found at intersection of these columns. Order blanks by number, adding B, E or EL to number to indicate size required. All numbers on this chart are carried in stock in "regular sizes."

**To Order Blanks not on the Chart:** Multiply spherical distance power by 8 and add 10 for the first two figures of blank number. Multiply the reading addition by 8 and add 10 for the last two figures of blank number. If distance power is minus, prefix 1. Thus:

+ 2.00 with + 2.00 added is Blank No. 2626  
- 2.00 with + 2.00 added is Blank No. 12626

## SUGGESTIONS FOR SURFACING ONEPIECE BIFOCAL OPHTHALMIC LENS BLANKS

Onepiece Patented Bifocal Lenses will neutralize correctly when surfaced on the convex side with +6. D. base tools of index 1.53, which must be accurate to gauge. To use any other base, add or subtract the difference from curves in column marked "Distance Power."

**Laying Out:** Dot around the dividing line with red or white marking ink and lay the blank on protractor. Locate and dot the required position of the optical center of distance portion and axis of cylinder, if any, at the same time "insetting" the reading portion the required amount for convergence. We recommend an allowance of 1 1/2 mm. above the dividing line for the distance center and our blanks are cut to allow for that. Special protractors will be furnished upon application for laying out these blanks for surfacing and edging.

Locate measuring points equidistant from center as marked on protractor. When marked in this manner, crumbing before surfacing is unnecessary. If prism is required, lay out line for direction of prism and measure thickness on this line.

**Blocking:** Use AOCO Iron blanks 47 diameter: 4D., 6D. or 8D. Convex surface as necessary, and AOCO M312 pitch. Pitch should be of uniform thickness, not less than 3mm. between lens and block. Heat the blank slowly and evenly, avoiding overheating.

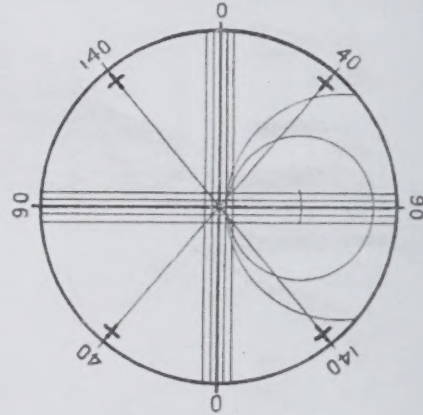
**Grinding:** Rough the blank to thickness required, using AOCO M301 roughing emery, and allow 0.2 mm. for smoothing, measuring thickness at the marks frequently to avoid grinding prismatic. If opposite points measure alike, optical center will be in correct position. Do not measure on the reading portion, as the lens is thicker there. It is absolutely necessary to use smoothing emery, AOCO M302, for second grinding, before using the finishing emery. Finishing emery, AOCO M303, is for finishing only, and is not intended to remove stock.

Correct results can only be obtained when these directions are literally followed. Great care should be taken with both the smoothing and the finishing operations to ensure exact focal values and a high lustre when surface is polished.

**Polishing:** Use thin polishing felt of best quality, AOCO M306, and AOCO M308 wet-ground polishing compound (rouge.)

As Onepiece Patented Bifocal Lenses are made from one piece of glass, all strains due to uneven expansion are eliminated, and possibility of breakage is reduced to a minimum. The lenses can be ground extremely thin even when addition is strong, and show entire freedom from color.

Blanks are exchangeable only for manufacturing defects. They must be returned in original cartons.



USE ONEPIECE BLANKS MADE BY AOCO

January 1, 1914







